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ABSTRACT

This document contains the proceedings of a conference on the general topic of labor market information, particulary the need to develop better methods, services, and subsystems for delivering such information. The source of the current concern for an adequate system of labor market information was the increased national interest in the optimum utilization of labor as well as in providing employment opportunities to workers. Participating in the conference was a diverse group from universities, employment services, vo ational education, counseling and placement services, industry, nonprofit organizations, and the civil service. The proceedings include reports of seminars on the nature of demand for labor market information, the sources of labor market information, and the processing and delivery of labor market information. (MF)

HUMAN FACTORS IN TECHNOLOGY RESEARCH GROUP
DEPARTMENT OF INDUSTRIAL ENGINEERING AND OPERATIONS RESEARCH
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PROCEEDINGS OF A CONFERENCE

ON

LABOR MARKET INFORMATION SYSTEMS: INFORMATION NEEDS, SOURCES AND METHODS OF DELIVERY

Co-sponsored by the Institute of Industrial Relations
and the Department of Industrial Engineering and
Operations Research, University of California, Berkeley

under the auspices of

the U.S. Department of Labor, Manpower Administration

HFT 70-5

Held at the Alumni House,
University of California, Berkeley

on

November 4, 5 and 6, 1970

TABLE OF CONTENTS

Wednesday, 4 November 1970	Page
"Opening Remarks"	
Jack Hislop	1
A. Merrill Anderson	1
Joseph Epstein	3
"Systems Overview"	
E.R.F.W. Crossman	9
"Systems Applications"	
Arthur Shiigi	18
"The Demand for Labor Market Information"	
Margaret Thal-Larsen	23
Seminar on the Nature of Demand for Labor Market Information from: Public Employment Security Agencies, Civil Service Commissions and Personnel Boards, the Schools, the "Outside"	
Margaret Thal-Larsen -- Chairman	29
Thursday, 5 November 1970	
Seminar on the Sources of Labor Market Information Within: Public Employment Security Agencies, Civil Service Commissions and Personnel Boards, the Schools, the "Outside"	
Edward Heler -- Chairman	43
Workshop -- Another Look at Information Needs and Sources	
Charles Roumasset -- Chairman	58
Friday, 6 November 1970	
"Labor Market Information -- The State-of-the-Art"	
Walter Postle	68
Seminar on Processing and Delivering Labor Market Information -- Present Means and Future Prospects	
Walter Postle -- Chairman	70
Conference Summary	
E.R.F.W. Crossman	78
Margaret Thal-Larsen	79
Joseph Epstein	81
List of Conference Participants	83
List of Acronyms Occurring in the Proceedings	86

WEDNESDAY, 4 NOVEMBER 1970 -- MORNING SESSION

John K. Hislop

Ladies and gentlemen, shall we begin? My name is Jack Hislop and I am with the Institute of Industrial Relations at the University in Berkeley. Initially, may I express my appreciation on behalf of the Institute at being involved in this three day seminar. I would like to thank both Dr. Margaret Thal-Larsen and Professor Crossman, as well as Walter Postle and the others from the U.S. Department of Labor Manpower Administration, for this privilege.

It is my pleasure to introduce Professor E.R.F.W. Crossman of the Department of Industrial Engineering and Operations Research of this University. Professor Crossman.

Professor E.R.F.W. Crossman

I would like to welcome the out-of-staters to California, particularly Joseph Epstein from the Department of Labor. I want to welcome the in-staters, too, particularly Merrill Anderson and Maury Gershenson. In this I speak also for Lloyd Ulman who, unfortunately, is unable to be here. As Jack mentioned, this conference is jointly sponsored by the Institute of Industrial Relations and ourselves.

For those of you who are not already aware, this conference was sparked by the Manpower Administration in connection with a contract we hold to design a Bay Area Labor Market Information System. It is a follow-on from two previous contracts on which Margaret Thal-Larsen was the project director. My own and Steve Laner's knowledge of the subject is derived from two previous contracts which we held from the Department of Labor to study the effects of technological change on skill requirements. So we are knowledgeable in the area of technology, automation and skills. But we are not particularly knowledgeable in any great depth in the subjects in which you, gentlemen, are expert.

Jack Hislop: I should tell you that Professor Ulman could not be here because he is doing what many faculty members are accused of not doing enough of, namely, teaching. And Merrill Anderson, Assistant Regional Manpower Administrator with the U.S. Department of Labor, has stepped into the breach this morning. Mr. Aguirre was suddenly dispatched to one of three regional meetings concerned with the problems of veterans. Though we regret Mr. Aguirre's unexpected assignment, we are very pleased that Merrill can be with us this morning.

Merrill Anderson

For the Manpower Administration and for the Department, we wish to welcome all of you to this conference on labor market information systems. I think this is the first time we have had such an array of talent with a particular interest in labor market information assembled on the West Coast. And I do not

think we have had quite such a diverse group of participants before. We have people here from the universities, from employment security agencies, vocational education, counseling and placement services, from private industry, non-profit organizations and consulting firms, and the civil service commission. We appreciate the cooperation of the University, particularly that of Jack Hislop and Professor Crossman in arranging this conference. I would like to add my personal thanks, also, to Margaret Thal-Larsen who has worked so closely with us through the years and to Walt Postle for helping with these arrangements.

Our topic of labor market information is of particular interest to this group and to the West Coast for various major reasons. As we all know we are now experiencing relatively high unemployment which places this meeting in a little different context. California is now above the seven percent level of unemployment. And our friends in Seattle are experiencing near-catastrophic conditions at this time. In the Manpower Programs of the last eight to ten years, we have been largely concerned with the disadvantaged. We have been in a tight labor market; we have been seeking throughout the nation for needed skills. But now we have a little tilting of the teeter-totter as we are all too well aware. I think one of the things we will need to think about in this rapidly changing labor market will be a better information system. And I think we will see some shifts of attention from the disadvantaged, although we will not neglect them, to the tens of thousands of job-ready applicants who are now unemployed. And I think we may need a revised approach in our services, maybe even a new approach.

To review quickly, I believe we can say that our manpower programs of the last decade or two have stressed labor market information. The Employment Act of 1946, which actually did not get off the ground for a number of years, was the first real indication of an interest in employment information. Then the Area Redevelopment Act was passed in 1961 and we were required to obtain <u>local</u> labor market information. The next significant step was the MDT Act (Manpower Development and Training Act) of 1962 which again brought increasing emphasis on the availability of labor market information to carry out that particular program. And then the Vocational Education Act of 1963 required certain labor market information for its implementation, as did the Economic Opportunity Act of 1964. In 1966 this emphasis on effective labor market information was renewed in the Vocational Rehabilitation Guidelines. And the latest significant legislation to repeat this emphasis was the Work Incentive Program (WIN) under the Social Security Act. In summary, I believe that the need for more and more accurate information implied in our manpower policies means that we must develop labor market information on a large scale.

I was in Washington last week at a meeting of my counterparts from throughout the Nation. There were comments on every side and at every meeting about the Comprehensive Manpower Act (CMA) now before the Congress. Particularly, there were references to the House version. From what I could glean in Washington, it appears that the Family Assistance Plan (FAP) is not going to pass except, possibly, on a trial basis. But everyone seemed optimistic that the Comprehensive Manpower Act will pass. That particular Act makes heavy demands for labor market information. Title I calls for the development of an early warning system as to changing markets. Title I also calls for local plans regarding economic, industrial and labor market conditions. Title IV provides

for a comprehensive manpower research program and defines the funds that can be used for that purpose. This Title also requires the Secretary of Labor to develop "a comprehensive system of labor market information on national, state, local, and other appropriate levels. To be included, too, is information on the nature and extent of impediments to the maximum development of our employment potential, and the basic characteristics of our labor force." This Act also specifically spells out methods of obtaining job opportunities and skill requirements information. Many of you are acquainted with the job bank system now underway in several cities throughout the Nation. In California, we only have one in San Diego -- but this program will be expanded to five more cities this year. I would say that under this new act we will see an increasing need for the activities represented at this meeting today, be it for counseling, education, placement or other activities.

In closing, I would like to say for the Manpower Administration that we appreciate your efforts to explore these matters. We have a group assembled here that can devote intensive work to this subject during the next three days.

Jack Hislop: Thank you Merrill for that educated glimpse of what we can expect to occur in this most important field during the next few years. Mr. Joseph Epstein from the Office of Research and Development of the Manpower Administration is with us today. He will give us a "Statement of the Problem: The 1968 Amendments to the Manpower Development and Training Act". We are happy to have you with us, Mr. Epstein.

Joseph Epstein

Thank you very much, I am very pleased to be here today and to join with you in an attempt to define some of the problems concerning labor market information. What is it? What is the need for it? What are its various dimensions? What are the activities needed for its improvement over current forms? And, finally, what are some of the problems for the future?

As we all know, labor market information is now benefiting by the attention given it from many quarters. For the first time it is being funded at the research level and at limited program levels to an extent that will permit serious examination of its role and utility in the manpower field. Within the Labor Department, and pursuant to Section 106 of the MDTA, we have in the 1970 fiscal year allocated about $16 million for so-called job matching and labor market information activities. And in fiscal year 1971, funding totals almost $30 million.

But before going into further detail concerning present programs proposed for labor market information, I think we should pause for a moment. We should give credit to the lonely workers in employment security offices who in past years have labored hard and with pitifully small resources to answer the cosmic questions: Where were the jobs and who had them? What jobs were coming along? And how could we advise the unemployed with respect to occupational shifts? Questions were asked as though answers, like apples, were only there waiting to be picked. In retrospect, the scope of our current work shows how unreasonable were the demands made of these people in the past. I am not certain that we still do not expect more from them than can rightfully be expected with the resources even now in sight.

But what is the source of our current concern for an adequate system of labor market information? Surely it must grow out of our increased national concern for the optimum utilization of labor, as well as the thought that a person should be able to expect not only a chance at some job, but at the job in which he could make a significant contribution to society and which, in turn, would provide decent income satisfaction and dignity to the worker. And Congress in its desire to achieve these objectives has in many statutes required, directly or indirectly, the development of a comprehensive system of labor market information to assist in creating an efficient administration of vocational education, manpower, economic development and various operating and training programs. I will not recite the list of laws that require this kind of information. Merrill Anderson did so a few minutes ago. But at this point I would like to mention that there is a gentleman in our meeting today who had more than a little to do with these Congressional requirements. I do not think he would mind if I point out Dr. Aller, who in his tour of duty in Washington must have spent many sleepless nights trying to get this kind of thinking across on the Hill, and even to the executive group.

In the Bill now under serious consideration in the Congress, the Comprehensive Manpower Act, there are substantial requirements with respect to the establishment of a comprehensive system of labor market information. Its emphasis has been on making the system comprehensive because the depth and breadth of information developed so far had not kept pace with growing needs for data to guide legislation and shape public policy. Nor has it been adequate for sound decisions in the job market by workers, employers, and public authorities. This is not to say that we lack for vast quantities of information already existing and constantly being generated which describe many aspects of the labor market. Virtually the entire output of the Bureau of Labor Statistics can be described as labor market information, as much of it has been developed in response to specific needs or has been the quantified reflection of operating programs. Therefore, the Congress has emphasized the establishment of a system. It is disturbed by the lack of coordinated effort to meet the needs of the labor force and of potential additions to the labor force. The Clark Committee of 1968, in reporting the 1968 MDTA Amendments, stated that occupational outlook information needs to be extended, strengthened and utilized in the broadest framework of labor market services.

Of course, as I have stated, labor market information is not an unexplored territory. Much is already being accumulated and I would wager that most of us in this room could easily agree on identifying the major components of a comprehensive system which would meet the demands of Congress and the users of such a system. But I would wager equally that few of us at this time could justify the relative expenditures of funds and energy for many of the components. We do not now have the information on which to base solid cost benefit analyses to tell us where the additional funds can be most effectively utilized and where cutbacks can be made with least cost and most efficiency.

Another factor which must be recognized in any consideration of the current status of labor market information and of possible changes in it is that we do not have the option of developing a system from scratch. Existing activities cannot be turned off like water. As a result, we must do what we can to improve current activities as well as simultaneously supply the components of a more sophisticated system. A new and comprehensive system should not only

recognize the potential of computers and other equipment but must also include the most sensitive insights that we have on technological change in production, and on shifts in consumer preferences as they indicate new directions in employment.

Under Section 106 of the Manpower Development and Training Act, the Department of Labor through the BLS and various agencies of the Manpower Administration is supporting several research and operating efforts specifically designed to improve existing knowledge of the labor market and to develop new approaches within the limits of stipulated budget resources. Some of you may not be aware of the scope of activities under Section 106. We have a Job Banks Program and a Job Matching Program which have taken the bulk of our resources until now and perhaps will do so for some time to come. These are being handled basically by state agencies. We also have several other projects and programs, some of which are state agency activities, some of which are BLS activities, and some of which are joint activities. And we have several projects with which my own office is connected. We have the Job Banks Program, the Urban Employment Survey (which is being phased out), the Research and Development or ORD Contracts (Margaret Thal-Larsen and Dr. Crossman). We have the Job Opportunities or Vacancies Program, the Job Information for Ghetto Residents Program, the Improvement of State and Area Manpower Planning Information, the so-called CAMPS Programs, and we have the Development and Extension of Occupational Employment Statistics (a first cousin to our Area Skill Surveys, but with its entire emphasis on the current occupational distribution of jobs). And we are studying an expansion of labor force data along the lines of the Current Population Survey which is going to be extended to cities.

The project in San Francisco, "The Requirements and Design of a Labor Market Information System for a Large Metropolitan Area", is aimed at a thorough examination of all the uses and users of labor market information in the San Francisco Bay Area. The project's design is grounded in a basic grassroots examination of all the institutions and procedures involving labor market information here in the San Francisco Bay Area. With this approach, we may obtain a better view of the practical problems encountered in providing useful labor market information as well as some help in determining the relative efficiencies to be gained from revising our current efforts in various ways. All this is with the intent of developing a system which will be more responsive to the needs of various institutions and people in the Bay Area. I emphasize the <u>local</u> dimensions of this project because one can start thinking about labor market information in a grand design which never reaches down to the people who really have to be helped and who need the help and need the data. This is a legitimate way of approaching the problem and one which we hope will crank out some very useful concepts bearing on this problem of determining the relative merits of investing in one direction or another from among the many ways in which a labor market information system can be attacked.

But what are the needs and who are the participants in a comprehensive labor market system? Perhaps it will be useful to spend a few minutes in presenting a more detailed explanation of the complexities involved in any fundamental discussion of the problems associated with a "comprehensive labor market system". I would like to quote from a document prepared by our Office of Research:

"The body of labor market information refers to detailed and comprehensive information on the magnitude and dynamics of employment and the factors that influence them, the characteristics of the labor force, and the processes that bring workers and jobs together. It refers to the economic intelligence used by manpower and other agencies in assuring the efficient functioning of the labor market at all levels. It is a body of knowledge needed for the elimination of frictions in the labor market arising from a lack of knowledge of job opportunities and of labor supply. It also refers to the body of knowledge on overall trends in the labor force -- employment, unemployment, and underemployment, geographic mobility, wages, turnover -- and other information needed for a comprehensive analysis of manpower for program development, for policy guidance, and for legislative enactment."

Now this is a large order. But if we can achieve it, we will have been successful in opening the door to reduced unemployment without the price of inflation which has always plagued our efforts to push unemployment below levels of around 4 to 5 percent.

Obviously the first group in the labor market for which we have a major concern are those we call the primary participants. These are basically workers looking for jobs and employers recruiting workers. Of course, there are many subdivisions within these groups, each with their special needs. The more diversified the economy, the more difficult it is to recognize and serve all of them. But, basically, labor market information boils down to getting jobs for workers and workers for employers.

Behind these activities, and backing them up, are what could be called the direct intermediaries. These are usually the agencies which assist workers and employers directly in job search, employability development and recruitment. Included are local employment service offices, vocational and other educators, private employment agencies, and a number of manpower and welfare agencies seeking to promote the matching of workers and jobs.

Then we have another group of organizations, which I call indirect intermediaries. At the national level, these agencies are concerned with overall economic and manpower policy and planning: The Council of Economic Advisors, the U.S. Department of Labor, the Office of Education, the Economic Development Agency. Regional, local and state agencies are included in these activities, plus non-government agencies, such as unions and universities. These are the people who stand behind and create the policies within which the direct intermediaries can work.

In addition, there are many other organizations which can be called specialized data generators. These include the BLS, the Census Bureau, and various other state and local agencies. Of course, some data are generated by the intermediaries themselves as byproducts of their own operations. It is certainly important for us to know how many blue-collar workers are being placed each month. Hopefully, data which will be coming out of ESARS and our other computerized data information systems will help us to know about such matters. That, of course, is an example of how intermediaries generate data which then become useful in the analysis of the entire problem.

Our discussions at this conference should highlight the strengths and weaknesses of the present system, and, hopefully, envision a future system of labor market information building on the best of our present activities but incorporating new concepts where appropriate.

It is important to recognize that not all labor market information is channeled through regular institutions. We all know that many jobs are obtained through information supplied by friends and relations and through the classified want ads. But there are gaps which need to be filled. We need more and better information on future occupational needs, especially at the state and local levels, for a variety of training and education purposes. Our forecasts at the national level also need improving. Unless we can perceive the shape and direction of the economy with a better batting average than has been achieved up until now, labor market information will continue to be weak as an essential source of information on which to base programs, training, and other activities.

Also needed in the arena of economic and manpower forecasting are more independent efforts. The amount of intellectual incest which goes on in Washington at year's end, when many keep their ears to the ground for whatever can be gleaned from others, is amazing. We need more information on the supply side of the labor market. Comprehensive and interrelated data must be developed on an area, state and regional basis. And ways to provide this on a current basis must be found. We need data to complement the cross-sectional data now available. Information which refers to the dynamics of the labor force would be helpful. Also there is a need for gross flow data on the labor force to help understand the net changes which are currently available from the population survey. Longitudinal surveys, though more costly than those based on cross-sectional random samples, can yield important time change data not otherwise obtainable. I might add that the Parnes project at Ohio State is really breaking important ground. A longitudinal vehicle is being developed which, I think, in time may become as important as the current population survey. But it will be aimed at accomplishing those things where only longitudinal time series are useful. The time limits of data depend on lags in publication and their periodicity. For instance, we all would like more frequent population censuses.

Perhaps what is needed most is better planning and coordination of the complex but essentially disparate collection of data respecting activities comprehended under the term labor market information. This could have as a byproduct more data at lower unit cost. At the present time, no single bureau or agency exerts effective planning for administrative control over the entirety of labor market information. The closest resemblance to that process is now lodged in the Office of Management and Budgets, Office of Statistical Standards. This office does attempt to make some such correlated pattern out of statistical programs. I think much more has to be done. And the "putting together" and the systems development in labor market information which can make the kind of correlated effort that we need, can come out of more and more meetings of this type. We need the information that will go through time, through occupations, through geography, and through the various levels of government -- Washington, state, and local.

I would like to close my remarks with a small sampling of the questions and comments raised at a meeting in Washington last week, when we had representatives of the Office of Research and Development and of our contractors present. Some of the questions that were asked, I think, represent the kinds of problems that are disturbing everyone in the field. One point raised was that a labor market information system ought to produce sufficient data to guarantee that institutions and individuals can make the right choices for themselves. What do the unemployed, or people seeking changes in their work, want in the way of information? Do we really know this? It is not easy to define what is really needed or wanted. What are the institutions at various level of our society doing to utilize the data that are available? What are the data of highest priority which, if available, would be used to the best advantage? How can we conceptualize the parts of a system now which will be useful now and also will be compatible with a more comprehensive system later? In other words, as we approach this "encountered system", as some people call the existing system, how can we make improvements in it, and also make changes which are not only useful in the current system but will serve as parts of an integrated system later? These are but a few of the questions that can be raised with respect to gaps, problems, and objectives in our present efforts. I am certain that our discussions in these meetings will identify other questions which will require attention, as well as point the way to some solutions.

Merrill Anderson: Mr. Epstein, I didn't hear you mention the Manpower Report of the President which is very useful to the States.

Joseph Epstein: Well, if I did't, I guess it is because we are so bugged with it right now that if I said anything about it I'd never get to other things. We are pleased that the Manpower Report of the President is beginning to rank as an important document. I believe many professors are using it as a textbook. I would like to suggest that anyone looking for what could be called the "authoritative position" in any given area that happens to be covered, can be assured that anything that appears in the Manpower Report has gone through at least 15 examinations to ensure that it has at least a minimum basic accuracy. I think it becomes a good source book for that reason. I don't want to miss this opportunity to plug the statistical appendix which is important for those who don't read the articles in the front. It does represent a real effort to get the most recent data in at the time of publication.

Merrill Anderson: My particular interest is that it is not strictly a Department of Labor document. You have inputs from Defense, Civil Service and others, do you not?

Joseph Epstein: I think I would characterize this report as a Department of Labor responsibility, but we do have inputs from other agencies. But getting it out is Dr. Rosen's headache. Everybody else can give you inputs, but the copy that goes to the printer is Dr. Rosen's and Miss Wood's special responsibility.

Walter Postle: Can you explain briefly the planning process that goes into the Manpower Report of the President? What is the time span over a year?

Joseph Epstein: Theoretically, the work on this report starts the minute the old one goes out. People have second thoughts about what they should have put in the present one and what should go in the next one. Various and sundry people in our office are asked what they think ought to go in; and those who have an interest in making a contribution or in soliciting a contribution pump hard for various inclusions. Tentative drafts of the outlines are then developed. Much of this work goes on in the very early spring and summer. In the early fall assignments are handed out, some within the department, and others to academic personnel or to other agencies.

Barbara Kirk: A very small point of information; I think Mr. Anderson mentioned a Manpower Bank in San Diego as a kind of prototype. I am not familiar with this. Is there anyone here who can give a brief explanation of this?

Walter Postle: It is called the Job Bank Program. It is a computer-assisted operation where our job orders are placed in a bank and then printouts are produced locating these jobs.

Barbara Kirk: Is it like an exchange?

Walter Postle: No, it is not an exchange. Actually, it is an inventory of the jobs available in any community every day.

Curt Aller: I am one of those who uses the President's Manpower Report with my students. They certainly appreciate the wealth of data. But I am intrigued by the fact that they are totally unimpressed by its analytical quality. They make invidious comparisons between the Manpower Report and the report of the Council of Economic Advisors.

Joseph Epstein: I would plead guilty that the report is not program-oriented or analytically-oriented.

Walter Postle: No, essentially it is a political document.

E.R.F.W. Crossman

I must first apologize that I know less about the subject of labor market information systems than most people here. My background includes several years part-time research related to manpower problems, particularly in the technological change and automation field, but I have little direct knowledge about labor market institutions so that, if I'm biased towards general labor supply/demand problems rather than specifically labor market information, that is the fault of my background. My other claim to your attention is that I have had extended and varied contact with industrial systems, and systems of various kinds operating in the real world outside the labor market. Our specialization in the Department of Industrial Engineering and the Human Factors Group has been the study of the interaction between human systems and technological systems. We have been working particularly with the concept of the "socio-technical system". This is a term devised a few years ago in the Tavistock Institute in London to characterize a field of study of the interaction between

the human, sociological and technological systems, so this is the perspective from which I shall start. I may also say that our group, particularly Steve Laner, is also involved in organization problems, and is working with the concept of time-span of discretion or responsibility and the way this fits into the operation of real systems in various practical contexts. So if I diverge into organization, don't blame me for that either.

Our present contract for study of the Bay Area Labor Market Information Survey, on which Margaret Thal-Larsen is project director, began July 1970, so we are only just getting into our grassroots study of the Bay Area Labor Market. At least I am; she has been involved in this for several years. We do not yet have any conclusions from the present project, as distinct from her previous studies.

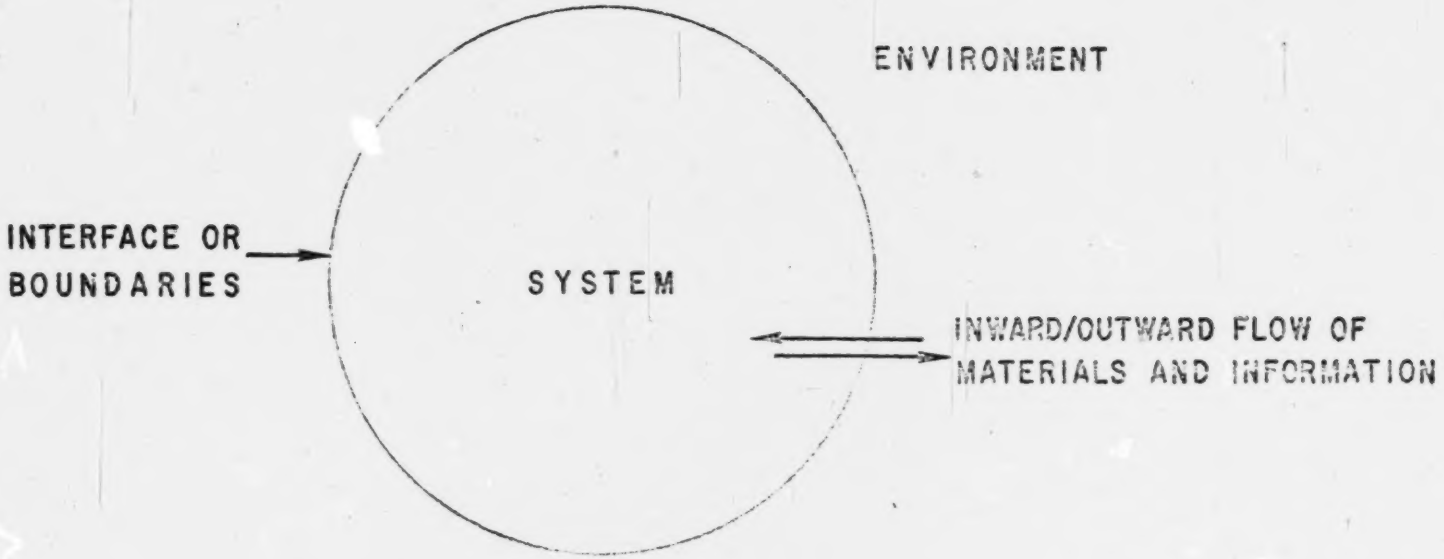
You will gather from this that I have no prescriptions to offer in the labor market information field. We are presently in the stage of exploration. A prescription will come much later, if at all.

Turning to the substantive part of my presentation, I want to take the problems in reverse order of the words in the title: Systems, Information, Market and Labor. These are also roughly in inverse order of concreteness. So I shall start by discussing exactly what we mean by a "system" and its implications for the present one. Then we will look at "information" as a system concept, consider "market" as a particular class of systems, and "labor" as a market commodity.

"System" is a very tricky and difficult concept. And nobody really understands at the present time how to analyze and synthesize systems with any generality. Lacking a truly general model, we must focus on a particular class of systems to make progress in analysis. In other words, engineers have no general prescription for how to produce a new efficient system or how to revamp an existing one. I might say here and now that there is a real live labor market information system existing in the field. We should not approach the system as if it did not exist and needed to be developed. The question of how to improve it must obviously take off from the present situation. A major part of the problem exists in analyzing the present system, rather than prescribing for a future one.

The first problem in analyzing an ongoing system is to distinguish it from its environment, in Gestalt terms, to focus on it as "figure" with the environment as "ground". And this is frequently difficult because a system is not a physical object but a relationship between objects. In open systems the boundary which we select arbitrarily for analytical purposes has a flow of materials and information across it. To facilitate later analysis we must find a boundary with the <u>least</u> amount of flow across it, that is we try to define our system to be as nearly closed as possible (Figure 1). However, the characteristics of the environment are generally very important for system functioning.

FIGURE I


ENVIRONMENT
INTERFACE OR BOUNDARIES
SYSTEM
INWARD/OUTWARD FLOW OF MATERIALS AND INFORMATION

Within the boundary, we have some kind of an organized unity. As a general purpose definition of a system we could use the following: "A set of people, equipment, and procedures mutually organized to attain externally set objectives or tasks". Evidently, we have to have components in the system. The people, or more exactly, roles occupied by the people, equipment and procedures are components. These components have to be geared together, they have to work together, to accomplish anything. Now a system, as I understand it, responds to externally set goals and objectives. The environment in some way or other sets the objectives, which the system must respond to. And there are very difficult field research problems involved in deciding whether particular components are within the system or outside it, and exactly where goals are set. As I said before, a system is not a thing; it is an analytical concept or model. And the modelling rules say that for a system to exist there must be externally set objectives.

We now turn to inputs and outputs. It is generally the case that most systems involve some kind of a process. We find that we must distinguish carefully between raw material or process inputs, and objectives or control inputs. There are various other classes of inputs. Incoming into the system are raw materials (data, actual material, people) which have to be turned into something else (products). It is possible to think of these as the only inputs. However, a more powerful way of looking at the system is to think of the objectives as inputs, and the result in terms of quantity or quality of the product rather than the product itself, as output. So the output, from the standpoint of the environment generally speaking, is not the product but some quality or quantity of the product. The product can be data or people. In an education system you take students in and put educated students out. The output from the system's standpoint is not educated students themselves, but the environmental evaluation of same, viz., degrees. Thus in the University of California, we find that Sacramento asks us not "how many students did you turn out", but "how many degrees did you grant". A degree is a measure of the quality of education applied to the student, and the number is obviously a measure of throughput quantity.

The concept of an environmental supervisor follows naturally. The environment is going to examine what the system is doing, and this implies a supervisor. So that, corresponding to any system you can think of, there is some kind of external supervisor setting objectives and evaluating results. Unless we can identify a supervisor for a real world system, we are in analytical difficulty because we don't know what is the function of this system, how we should measure or evaluate its functioning. We have to measure in the same way the actual supervisor does. (Figure 2).

Our control inputs to the system are as follows: There must be some resources with which to perform the process. There are also going to be some disturbances, i.e., there are going to be some features in the environment which prevent the process from running exactly as planned. Thus the system has to be geared to null out disturbances, as well as to respond to objectives and to use resources. We can often couple disturbances with demand, for there will generally be a fluctuating level of demand. For instance, in the educational case there is a fluctuating level of demand for different kinds of education. So the education system must deploy its resources effectively to maximize its product given a fluctuating student input. Just to take another actual case,

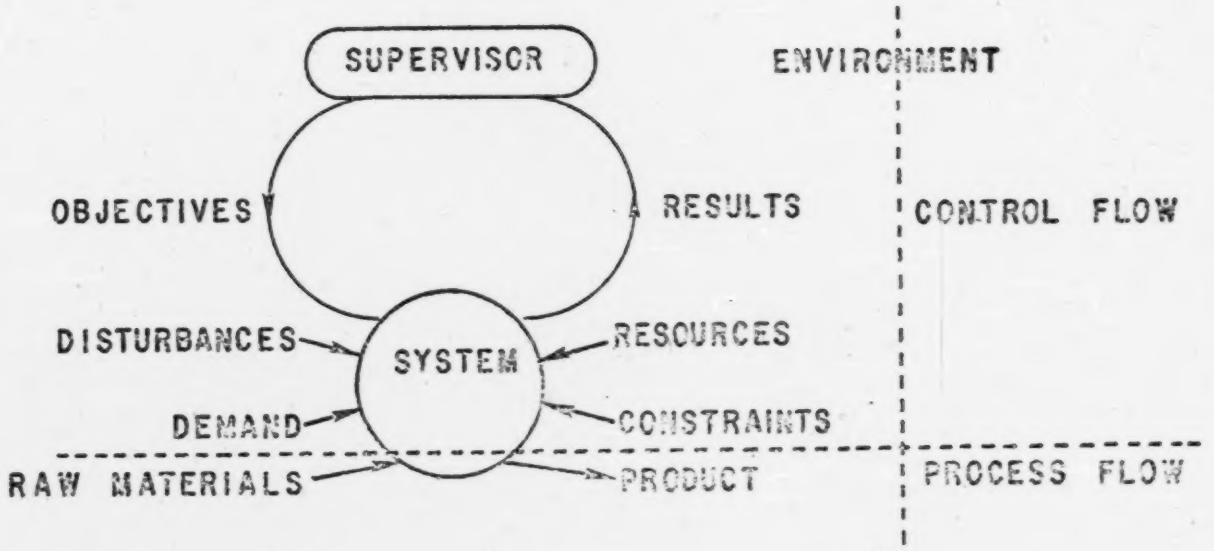

SUPERVISOR
ENVIRONMENT
OBJECTIVES
RESULTS
CONTROL FLOW
DISTURBANCES
SYSTEM
RESOURCES
DEMAND
CONSTRAINTS
RAW MATERIALS
PRODUCT
PROCESS FLOW

FIGURE 2

an electrical generating system has a rather regular seasonal curve of demand which goes by day and year. The electrical system is able to predict rather well the demand for electrical power at a particular time of day on a particular date. A lot of system function is concerned with predicting demand so that resources can effectively be brought to bear. What happens in practice is that available generators are brought on line ahead of the time when the demand is expected to increase. In other words, if it is known that everybody will turn their air-conditioners on at 11:00 in the morning, the system will bring more generators up to speed at 10:00. Most practical systems that we have analyzed have some internal sub-system for predicting demand.

Turning to the physical process, in our case the raw materials are job seekers and vacancies, and the product would be job holders and non-vacancies. We also note, of course, in this case that a lot of the product will go through the system without being processed, so we are going to have some of the product just being job seekers and vacancies. Now an important question that we face is the following: Supposing we take this particular identification of the raw material and product of a labor market system, what are the objectives and how is the evaluation performed on the process? In other words, exactly what are we trying to accomplish in transforming job seekers into new job holders? Are we trying to transfer as <u>many</u> as possible, or as highly paid as possible, or what? The present evaluation system set up by the "supervisor" lays weight on particular classes of job seekers, veterans, disabled, and hard-core. So, operationally, at the present time the public employment system is geared to particular classes of job seekers. There are other possible raw material/product identifications which correspond to different systems. In the real world we generally find several systems which operate coextensively using the same components. In these cases, for analytical purposes, we assume we are not dealing with a system which does several things, rather we are dealing with several systems. In the present case, out of vacancy information you might generate as a product job forecasts rather than placements. We will probably find as we go on that we have several different systems overlapping in the labor market area. At this point it may be worth noting that all of the inputs and outputs I have mentioned must be considered as functions of time, when we measure resources, disturbances, etc., and the objectives may also fluctuate through time.

Joseph Epstein: To make it a little clearer, it is important to note that one of the greatest weaknesses of the system, as we think about it, is that it is from the present to the future. And we have the question of anticipating not only vacancies, but also that there will be people there ready to take the anticipated job. If our system works right, there will be not only job opportunities but also those ready and able to take those jobs. And to the extent that we can work the system right, there will be no vacancies, but rather opportunities, and people ready to take them.

E.R.F.W. Crossman: You are rightly pointing out that in order to meet the real time requirements something must have been prepared yesterday. Most systems have a forward orientation, a planning horizon, since it takes time to get anything done.

Sherrill Neville: There might be some question about your statement that the employment service is a specialized system for all places and all aspects.

E.R.F.W. Crossman: There are some operations which have a general system aspect. But for analytical purposes, I do not want to accept the notion of a general system. I think we must assume a system is something geared to particular objectives and raw materials and we cannot say that there is such a thing as a general system. We have to talk about specific systems. In the going world there are a number of systems operating simultaneously and overlapping one another. For analytical purposes the identification of a system is those components which are organized to respond in one particular way to the environment. However, the components may be time-shared with other functions.

Steve Laner: Are you implying then that every time your objectives and materials change, you in fact have a different system?

E.R.F.W. Crossman: No, not at all, provided that the organization of components remains the same.

Joseph Epstein: I was just wondering if it would be helpful to think of these parameters in terms of government operations; whether they can be defined with operational needs or budgets?

E.R.F.W. Crossman: The Congress is really the supervisor in this case. So the system is correctly geared to responding to the kind of quality they want.

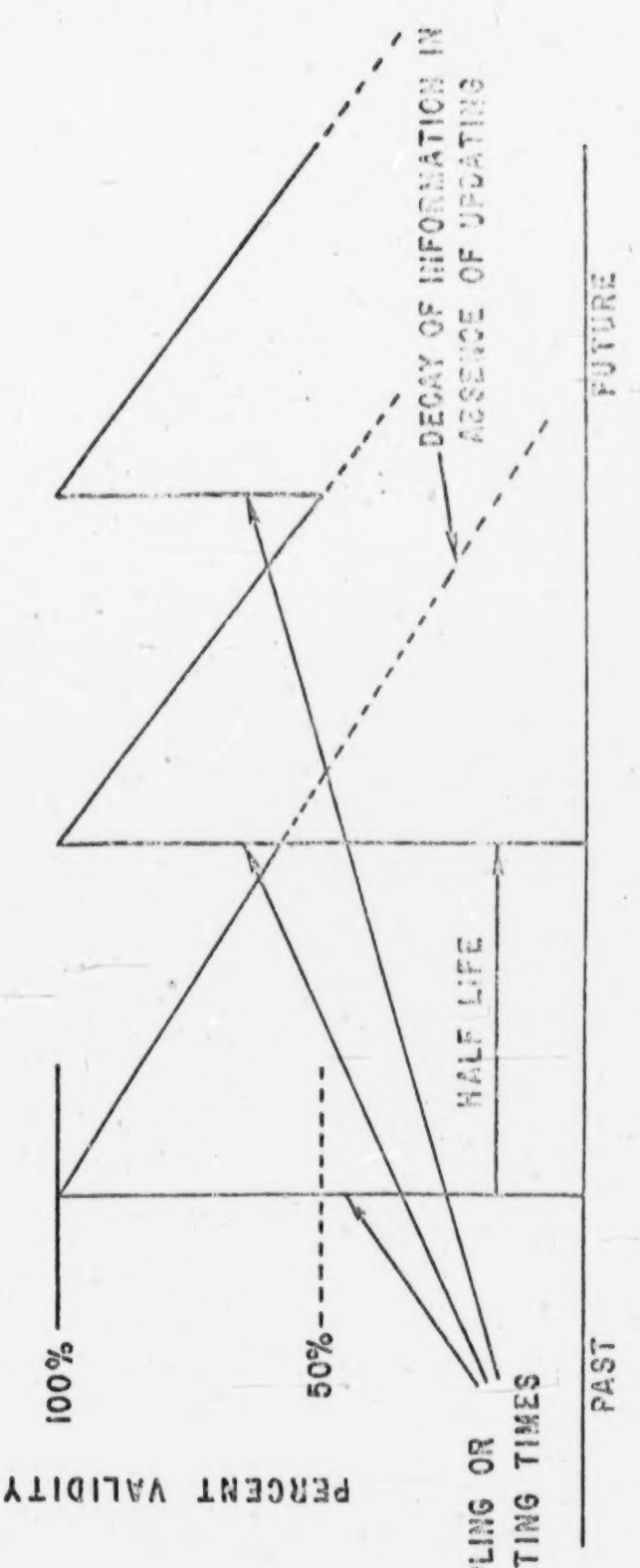
Turning now to the term information. It is, generally speaking, true that information is the key activity or the key quantity flowing in any system. As our recent studies on technology showed, there is presently an information revolution going on. Methods of processing information in systems have really changed radically in the last 15 years, partly due to the digital computer and partly due to various kinds of control systems and remote transmission channels. There has been little recent development in power sources of the kind that sparked the Industrial Revolution. But when we talk about information, we are talking about something which is currently in process of technological revolution. Therefore, we must try to understand it. To help us we have some very exact tools developed by Claude Shannon and others for measuring the amount and flow of information, and correspondingly, the amount and flow of noise. Noise is, roughly speaking, anything you don't want to hear or anything which is not a signal, from which we deduce that a signal is what you do want to hear.

It is important to distinguish between data and information. We can have a tremendous amount of data about a subject which does not reduce our ignorance. So you cannot have information unless you have prior ignorance, and, if you have data, you may still not have information unless it reduces your ignorance.

Very frequently information is needed in a system to determine exactly how to allocate or deploy resources to achieve a desired effect. This means having a correct model or representation of some part of the environment.

It is useful (see Figure 3) in many cases to think of information as a decaying quantity. If we know something today about the environment in a real-time system it does not imply that we know it tomorrow. We can think of information in the form of a current image or model of a particular real-world

FIGURE 3: HALF LIFE OF INFORMATION



sources even now in sight.

situation, as having what we may term a "half life". In most practical systems there is therefore an updating or sampling procedure, such as making a survey, which restores the model to 100 percent accuracy for a brief period. The proper sampling interval depends on the inherent variability of the situation itself.

Based on the half-life concept, I would like, tentatively, to classify labor market information in four categories: unskilled vacancies (half life 1 day to 1 week); short term (1 week to 1 month); medium term (1 month to 1 year); and long term national occuaption trends (over 1 year). It should be obvious that labor market information includes various different decay categories. To avoid confusion, I think it is important for us to estimate the half life associated with each different kind of information we discuss and avoid mixing diverse kinds.

Turning now to information retrieval and delivery, rather than information itself, and looking at the labor market information system from this standpoint, there is apparently a major problem in channelling or "addressing" information correctly, i.e., to the right recipients. With 30,000 job titles in the Dictionary of Occupational Titles (DOT), there is only a 10^{-9} chance that a random applicant and a random job vacancy will match. In this case, the correct addressing needed to get the correct job information to the correct person requires somewhere on the order of 15 bits of information per vacancy. This is a minimum. In practical systems it would be quite a bit more because of the need for redundancy.

We also note that there is a noise problem, i.e., that of getting information to the wrong people. If the addressing system goes wrong and you deliver a whole batch of information on jobs for which a person is not qualified, it will occupy his attention but convey no useful signals. From his standpoint, this is noise. It may be that the system should spend as much effort guarding <u>against</u> delivery of noise as in ensuring the delivery of signals.

The third item in our backwards analysis is "market". We note that the labor market is a market like others, and we can draw a number of useful analogies. Generally speaking, we can say that a market is a specific kind of system, one for supply and demand, thus resolving an imbalance. For example, the stock exchange is a market for balancing the supply of investors and investment opportunities against one another, resulting in sales of stock. Referring back to our analysis of the system concept, we must look for the objectives of a market, and this raises the question of who or what is its supervisor. In the case of the stock market, I suggest that the "supervisor" is the set of individual buyers and sellers, that is, there is no external supervisor, and the system is supervised by those of its participants who enter the market as buyers and sellers. With respect to the labor market I would suggest that there, also, the participants are in some sense the supervisors. Somewhere along the line we must distinguish between external (e.g., congressional) supervision and internal local supervision by the members of the market themselves. With regard to the objectives sought by the "supervisor", we must assume that these are speed and quality of matching between supply and demand. It is not clear to me exactly what this means in the labor market, that is, exactly what the participants want to accomplish. Only when we know this can we know what kind of information system is required to meet that need.

Pursuing the analogy with other markets, it is obvious that markets rapidly become specialized. This phenomenon is associated with the information storage and retrieval problem, because a market essentially is a crossover information system. You have one set of information coming in from suppliers and another set coming in from demanders. The market system creates a memory or file. Thus supply information is channelled to demanders and the demand information to suppliers. The reason that markets become specialized is that specialization reduces the variety of supply and demand and hence reduces the size of the file required to service it. The Labor Inventory Network Communication System (LINCS) in Sacramento is a good example of this principle embodied in a computer-based job exchange. If the market is in fact an information exchange, then the bulk of its resources should be channelled into processing, storage, retrieval and delivery of information.

Looking lastly at labor, there is a great deal that could be said about the nature and description of the labor force and the jobs workers hold. The main informational problem arises from the great specialization of labor in modern industry. We have been involved in trying to analyze the effect of technological change on what is classically termed the "division of labor" and on skill requirements, but since time is short I will not pursue this theme at the present time.

By way of conclusions, I want to stress the need in our discussion to consider different systems and subsystems separately, i.e., we should not try to deal with everything at one time. We should try to identify systems and subsystems one-by-one, and establish their importance in the labor market, the time scale they operate on, what resources they consume, etc. By doing this we could come up with an inventory of existing systems; how many systems are there, what do they accomplish, how do they interact, how they fit together, who, what and where their "supervisors" are, and so forth. I feel we have a group here eminently qualified to accomplish this task.

Art Shiigi

Dr. Crossman's comments were most appropriate. And they will be very helpful in my presentation. I believe my little "system" will be a lot easier to explain now that Dr. Crossman has laid the groundwork.

The title of my subject is "Systems Application". However, I would like to talk about this subject in the context of a "job information delivery system". This is the term we have been using all over the country in describing our program. What I will do here today is give you a brief description of job information needs, the sources of needed information and the delivery of this information.

I think I should give you a little bit about my background so that you will know the context in which I will be speaking. I used to work for the California Department of Human Resources Development. While there, I was in the Unemployment Insurance Section (UI). In UI, there is a great need for job market information. When claimants come to the local office their main concern is that they want a job. Thus, we have to find out what jobs are suitable

for this claimant. Also, the UI code requires that the department interviewer furnish the claimant reasonable and specific instructions on where to look for work and how to go about his job search. If the interviewer has this kind of legal responsibility, he needs precise information which can be imparted to claimants. For years, however, most offices have not had this type of information. The law says one thing, but in practice very little has been done. So to meet this need we have developed a "Job Information Delivery System".

At the present time I am with Computing and Software and we have a contract with the Department of Labor's Unemployment Insurance Service. We operate almost as an extension of the federal agency. We are going to various states where we conduct workshops relating to a Service to Claimants Program. This program is an effort by the UI Service to teach people how to look for work, to give them precise information as to where jobs are, and to inform them about the way they should apply for work. Our objective is to return claimants to work much sooner than they would otherwise be able to do. We aim to help them conserve their own resources in terms of money, time and travel.

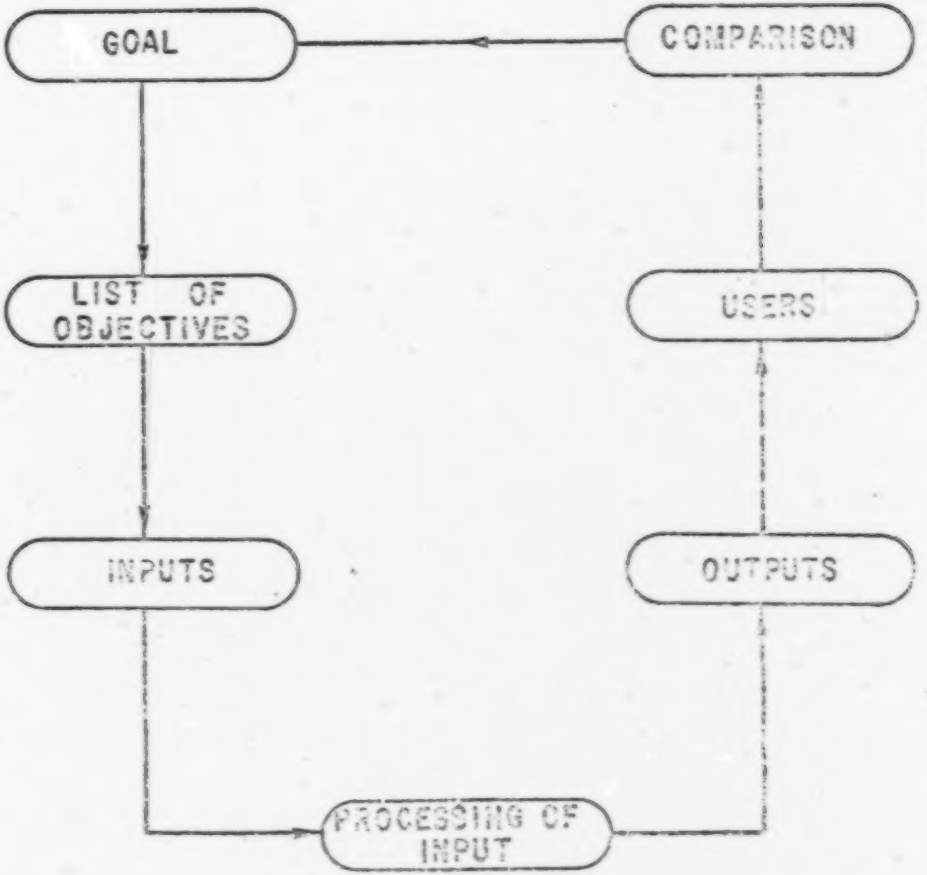
Our Service to Claimants Program includes the following states: Washington, California, Arizona, Minnesota and Massachusetts. These represent the "Five Cities Program", a program set up for fiscal 1970. Wisconsin, Missouri, Illinois, Ohio, Pennsylvania, New York, New Jersey, and Connecticut are in the "Eight Cities Project". Our primary responsbility now is to show these states how to set up delivery systems. We have had three workshops, in Sacramento, California; Hartford, Connecticut; and Columbus, Ohio, respectively. Oregon, Utah, Tennessee, Mississippi, Alabama and Georgia have their own Service to Claimants Program.

Systems Chart (see Figure 4): We started out with a process and then we had to define what our goals were. By goals we mean a broad statement of what is to be done, what is to be accomplished. We used the term objectives to mean how you meet these goals. There are also the inputs (the various items that are needed; the processing of the material; and how the information is delivered to our users).

We had a real problem in defining our program goals. Who are we really trying to serve? We are talking about a grassroots system in this program. We are trying to get information to the interviewer and to the job seeker. Ultimately, we are talking about the job seeker because the interviewer is an intermediary. But in UI certain duties are required of the interviewer by law. He has to give information; he has to make decisions. He, too, requires information. The important thing here is that we clearly defined our goals and specified who the users were going to be. We had to answer that question in order to find out what kinds of products we were going to develop--whether a product that would be given to job seekers on a handout basis, or whether it was always to go through an intermediary. In terms of priority, we decided that we would emphasize the needs of the interviewer.

Let us turn to how we went about identifying the needs and objectives of our system. The first thing we did was to determine the legal requirements affecting the system. We looked into the Unemployment Insurance Code. It requires that the Department shall give reasonable and specific information to claimants looking for work. We studied the regulations in the Administrative

FIGURE 4: THE JOB INFORMATION DELIVERY SYSTEM



Code which explain terms like "suitable work", and state that the job seeker is required to make an effort on his own behalf to look for work. Then we considered the precedent decisions that the UI Appeals Board has arrived at, in which are defined such matters as the labor market for a specific claimant. In UI there is not just one labor market. There is a labor market for each person. One person may say "Well, I don't want to travel more than fifteen minutes from home." Another may want to work in one kind of industry or one size plant only. So by interpreting a person's restrictions we have to determine the size of his labor market, and if it is "reasonable" in terms of the amount of industry or the jobs available to him. We next conducted a statewide inventory which hit the middle management level and the local office managers. We asked local office managers what they thought interviewers needed. We wanted their opinions on what people in the field felt interviewers needed, what information was currently available, what they were using, and we asked for their suggestions.

We also developed a community profile. We wanted to know what industries are in a community, where a given industry's jobs are in terms of job locations and the locations of workers.

We also prepared a composite list of "significant jobs", analyzed the data, pared the composite list, and prepared another list. We conducted a study for the Five Cities Project in the San Francisco-Oakland Bay Area to find out which of the jobs (and unions) were significant to a particular office in order to learn where we should concentrate our efforts. In the San Francisco UI Office the sample size was 550 claimants, and a review showed that there were 209 different occupations represented among them. But only 83 occupations accounted for two or more sampled claimants. These occupations, we decided, were the "significant jobs" in that office, and these were the jobs on which we would prepare detailed information. If we did that, each interviewer would have detailed information on about three out of four of the occupations in which claimants could be expected to be interested. We found that many of these jobs were union occupations.

Joseph Epstein: Is this a kind of system for establishing the number of job clusters you should include? How do changes in the labor market situation for various occupations which, in turn, influence the employer's view as to whom he will accept, affect the jobs you regard as "significant"?

Art Shiigi: Ideally, once you had this thing on computers it could be quite responsive. You could read the monthly printout and identify the jobs that are important at any particular time. The Berkeley office prepares some information based on their 79 occupations and the Oakland office will do the same. Some of the Oakland information on occupations can be exchanged, and vice versa. But our list was done at one specific time and it was done manually.

Joseph Epstein: The term "significant job" can cover a variety of jobs. Suppose you take the occupation "secretary". This can mean medical secretary, legal secretary, business secretary. The doctor could not care less about a legal secretary. So you have two jobs instead of one. How do you go about determining, for operating purposes, what really constitutes the significant characteristics of a bundle of jobs?

Art Shiigi: When we get into actually preparing job summaries, we encounter this problem of related occupations. Sometimes we solve it by preparing separate summaries for related jobs.

Most of the states have information available about the numbers of workers in different jobs. We talked to various people in various workshops and they mentioned reports like ESARS (Employment Security Automated Reporting System). When we started in California, we went to the tape for the report on Payments by Industry and Occupation. But still, our list of significant jobs in local offices is just a guide. The local manager can suggest that we look at a job that is not listed. And one of our criteria for the list is not only the volume (the number of people that are in that occupation), but also the number of problems the UI staff have with the classification.

Now we come to the unions. Our survey showed that the San Francisco Commercial and Service Office dealt with workers from 33 different unions; the Industrial Office, 64; Berkeley, 43, Hayward, 55; and Alameda, 77. We could not look at all of those, so we decided to look at the volume unions. Just by taking the volume ones we were able to get information for 70 to 92 percent of the union claimants.

Steve Laner: You said that you regarded a job as "significant" when you had two or more claimants representing the occupation?

Art Shiigi: Yes, two or more based on the sample. We had to make some arbitrary decisions because we had only one person per local office and we couldn't possibly tell them to work on all of them. So we told them to pick out the most important ones and prepare summaries.

Steve Laner: If you wanted some priority ranking on those for which information was to be prepared, presumably, you would go to three and above, four and above, and so on?

Art Shiigi: You could.

Steve Laner: Have you done that at all?

Art Shiigi: No. We had our hands full when we started this. If you prepare materials for a local office interviewer on any jobs, you have to give him enough material that he gets into the habit of using it in more than 50 percent of the cases which come before him.

Joseph Epstein: Is this then a means of winnowing down the number of different jobs the claims officer should familiarize himself with?

Art Shiigi: Yes.

Walter Postle: Basically, the problem here is to try to cut down to manageable proportions the number of jobs that are studied. And in the UI Office this is one way of doing it.

Art Shiigi: We really raised a question. People say "Okay, we need job market information". Obviously you cannot tell someone to study that subject unless you answer the question, information about which jobs?

Irwin Wingeard: I think this method might be a very good idea. The thing that concerns me is establishing this list at a given period of time, instead of making it over a period of a year, because of seasonal variations. In addition, what do you do about changes in economic conditions? For example, at the time you did this maybe the aerospace industry was at its height. What happens when this industry begins cutting back? You have got to change signals pretty fast.

Art Shiigi: Ideally, you would set up a system and obtain a printout every quarter. Based on payments of claimants by occupation and industry, such a printout is available every month. However, we did not determine how to use all this information on a monthly basis. We decided to identify the volume unions, and set as our objective the preparation of 19 summaries on these 19 unions. We will pick up the others later.

WEDNESDAY, 4 NOVEMBER 1970 -- AFTERNOON SESSION

Margaret Thal-Larsen

After the wide-ranging presentations of this morning, we will now have to go in for a little specialization in the subject matter we are considering. As you may have noticed from your agenda, this afternoon is to be devoted to the need for labor market information.

After several years of wandering about in the wilderness of a large metropolitan area and of attempting to discover an answer to the question "What is the need for labor market information in such a community?", I really doubt our ability to make speedy progress in answering this question. And nothing that I heard in the excellent talks given this morning, when we looked at labor market information from various perspectives and various angles, reassures me that a single afternoon will be enough time for us to arrive at many conclusions as to what this need really is.

In my own investigations I have found it necessary to confine my thinking, at least at the start, within a certain structure, in order to reach any agreement even with myself as to how to find the answer to this question. Because manpower viewed in its relation to work, to jobs, is a large subject, the information needed to effect relationships that are individually and socially beneficial is indeed a huge and complex subject. To make any progress at all in discussing this subject in a single afternoon will require some structuring of an amorphous mass of material. And you should know something about the limitations and assumptions I will use to structure my remarks in order to expedite our discussion of information needs. Quite possibly some of these will have a certain utility, also, in our later efforts at "system building".

First, I do not intend to play the role of Devil's Advocate by laboring the broad question -- "Do we really need labor market information?" We could state, and people have, that some 80 million workers are employed in this great nation, and somehow they obtained their jobs without the smooth functioning of a comprehensive, or even a well-ordered, system of labor market information. So why worry?

I do not mean to imply that we should fail to pay attention in our discussions to the actual need for certain specific types of information and to ask ourselves, How timely must these data be? How localized must they be? How accurate must they be? Who really needs this information? These questions, I should judge, must all be confronted in our "system building".

But so far as the broad, general question of need is concerned, I, for one, have been relying on instinct, reinforced by several years of being on the receiving end of the impassioned pleas of many highly articulate survey respondents. When enough qualified practitioners in such activities as placement, vocational guidance, community information activities and manpower administration and planning tell you that they cannot perform their duties effectively without labor market information and do not now possess the information they need, this question of need must, finally, appear to one as settled. An unfilled, or defectively filled, need for this information must be assumed to exist.

A second bit of "structure" (for lack of a better word) that will color my remarks about the need for labor market information rests on the thought that we should resist being too affected by the winds of policy that blow at any given moment and dictate that a specific service (for example, placement) is to be emphasized or not emphasized in the public service or somewhere else. We should seek rather to identify certain functions in our economy and in our society, and one of them is finding a job. We should then seek to determine what items of information are required to assist in this process. And the chances are good that these items are the same whether they are needed by the worker himself in an independent job search; by a public employment service interviewer who will convey this information, as information, to a job-ready applicant; or by a private or public employment agency interviewer who is seeking to develop a job opening and make a formal placement of a work applicant.

Along with this bit of structure should go a third. We cannot allow ourselves to become so bemused by the merely seeming differences in the content or the format of certain kinds of information as to forget that we may be speaking about a single category of information.

If, in order to do a good counseling or placement job we find it necessary to be able to convey to the counselee or the work applicant some descriptive information concerning the customary job setting or job duties of an occupation, chances are good this necessity would apply both to workers who are bound for the physics research lab and the peach cannery. Chances are also good that the requirements for gathering the labor market information component of the "message" are similar in either instance no matter what the means of delivery or the form in which it is delivered. In other words, the important thing is to create the necessary system to collect and

disseminate a given category of labor market information such as "job search information", whether we fill the pipe lines with one type of content or another, depending on time, place, and the type of applicant.

Another bit of "structure" which it is well to keep in mind, constantly, is that the labor market information which is needed at higher levels in an administrative hierarchy for overall planning and for decision-making is often the very same information which, without aggregation -- or aggregated differently -- is required for operations at a lower level. Thus, often, if we have satisfied needs for information at the lower level, our problem is at least partially on the way to solution at higher levels, or across broader geographic lines.

Now, somewhat, although not entirely, related to this thought is another assumption about a labor market information system which I call my "hidden assumption". I call it a hidden assumption because most of the time I try to hide it even from myself for fear it will somehow bias my thinking about labor market information systems. I am particularly anxious to put this thought on trial with you today (even though you may disagree with it) because it will simplify the remainder of presentation and promote its brevity. My "hidden assumption" is the following: If local offices of the public employment service were to possess the labor market information that they maintain they require for the effective performance of their duties, all other users of these data would then have available the data they need -- or be greatly assisted in obtaining them.

As you can see, this assumption implies, if it is valid, that my talk to you (purportedly a discussion of needs, <u>community-wide</u>, for labor market information) can become primarily a description of local office needs as they are found in the Bay Area and still be reasonably comprehensive.

Let me give you a few examples as to whey I believe this assumption valid. When we asked a representative sample of Bay Area employers about their needs for labor market information, everyone of the items they mentioned was part of the body of information later cited as needed by the local offices. True, employers did not assign the same priorities to the various items they said they needed as did the local office managers, but the items were the same. These were:

1. Local wage rates by occupation.

2. Current labor demand/supply relationships in specific occupations (the "odds" for being hired in a specific occupation which local office people mention).

3. Modifications in the qualification standards for specific occupations.

4. General employment trends in the Bay Area and in the state.

5. Information on the comparative adequacy of labor in various geographic areas, which, of course, the local offices say they need in order to answer the inquiries of employers concerning contract awards and recruitment plans (as well as to plan their own clearance activities).

Sometimes one does find this kind of circularity in running down information needs but it does not refute my point -- take care of local office needs and you will have made a good start to taking care of all other needs. At least, you will have indicators of most other needs if you catalogue those of the local offices.

We did not interview a representative sample of job seekers concerning the items of labor market information they would wish to have. However, there is every reason to believe that employment interviewers -- both public and private -- can speak for them as to the strictly labor market information content of their requirements, even if not to the manner of its delivery.

The job seeker wants to know "who hires whom?" with all this implies, and that's a lot. He wants to know what we might call "job search" information.

The name and location of the employer and how to get there.

The occupational distribution of the establishment's employment to give some notion of the "odds" of obtaining employment.

The nature of the job -- duties, wages, working conditions, the job setting.

The specifications which the worker must meet in order to be hired-- training and educational background, possession of skills, special traits and aptitudes, physical and other capacities.

This is exactly the information to which employment offices, both private and public attach the highest priority of all. It is the information they wish to give the job-ready applicant if they regard their service as giving information. It is the information they need to effect a placement if that is the service they are rendering. It is also a very important ingredient (at the individual plant level and as aggregated) in both local office counseling and school counseling.

Speaking of schools, if one questions school counselors and administrators, he will find a surprising amount of stress laid upon this matter of current job opportunities information. Of course, and understandably, school counselors place heavy emphasis on acquiring more and better occupational trends information. But this is also a type of information which the local office people regard as of prime importance to effective operations. And so, one can go down the line, or out in the field, questioning agency after agency and find this great similarity of needs.

Now, with this elaborate justification for what will be my concentration on local office needs for labor market information, I shall give you a brief run-down as to how the findings of our current project are shaping up in this particular respect.

Top priority, undeniably, is given to current labor demand information, an item that blankets all the points I mentioned previously -- plus a few more. This information is wanted, as I have mentioned, at the individual plant level. It is both quantitative and descriptive. Filed occupationally, it gives a picture, hopefully, that will indicate the relative importance of job demand in a

particular occupation and in a particular community -- plus a great deal of information about the nature of these jobs and the types of workers who are hired for these jobs. Its source (to stray to tomorrow's subject for a moment) is an active employer relations program. Such a program is the only source of information on individual firms and industries out of which we can effectively develop job opportunities and training opportunities for individual workers.

I say, hopefully, the information will give a picture of the relative importance of this occupation in the community, because at this junction we have stepped into an area where merely beefing up a local office employer contact program is not enough. What we are told is needed is a "statistical reference point" although this is not the way the local office manager phrases his need. What is wanted is clear -- knowledge as to the relative importance of different occupations in a given community. The problem is also clear -- the unrepresentativeness of that body of job openings about which the local office can obtain information because it receives the actual job openings from employers. Various estimates have been bruited about as to a given local office's penetration in its local job market. It can run as high as 50-65%. Some offices say 5-10%. I have seen cases where it appeared to be 15%. One thing is certain, however, those openings the office does have are not representative by occupation.

Finding this missing piece of a labor market information system implies choosing amongst several alternatives: First, there could be a Cooperative Employment Statistics type program with a sufficiently fine occupational distribution and one that is sufficiently localized. With a knowledge of turnover by occupation, such a program would indicate the occupational distribution of a total labor demand and tell us much about potential labor supply.

Second, we could choose a Job Vacancy Study -- also sufficiently detailed as to occupations and localized to meet local needs.

Third, we could conduct an old-fashioned skill survey -- say biennially administered. Some managers show a definite preference for this option because they believe that the selection of occupations would be locally influenced.

Fourth, some of our respondents state what they need is merely a more extensive spread of information about job opportunities than can be gained through local office job openings (supplemented by want ads, civil service announcements and what have you). But they do not feel a need to know about the universe. In this vein, some imply they would settle for a canvass of Major Market (MM) employers plus the smaller establishments with which the local office does business.

In any event, when the offices are talking about this item that I call a "statistical reference point", plus the descriptive information they want, I believe they, in fact, are speaking about the "Job Opportunities Bank Book". This is to aid them in job development in the later stages of the job matching or "Computer Assisted Manpower Operations Network" program rather than the Job Bank Book. This in itself shows that, no matter what the degree of sophistication of our operating procedures, certain needs are basic to the operation.

I haven't time to talk in this same detail about the other species of information the local offices want, but they are not less important if we are to support the four functions I mentioned at the outset. And often there are analogous problems in obtaining what the offices need respecting other "pieces" of information than those concerning current labor demand.

One of the other "pieces" that they want is current labor supply information. Here again, as with job openings, the information the Bay Area offices, at best, gain through their present operations is fragmentary. Now that we no longer take applications except in certain specific situations, our application file is not representative of a major segment of the job seeking populace -- as it was when an application was on file for every claimant.

I am not going to discuss at length the needs of local office and school counselors and administrators for job prospects information, a greater knowledge than we now have about future labor demand and future labor supply. It is crucial! But I see enough people in this room to whom this species of information is a critical need, so I will leave this discussion to others -- either within or outside the public service.

The time I save in foregoing any exposition of this subject I want to use for mentioning the very high priority our local office managers assign to localized economic data -- to localized, current, census-type data describing their communities.

This need has several origins. Advertising the managers as "knowing everything" is one of these. But I believe this information need is one that we must examine very carefully before we start proposing to fill it.

I suppose I am saying -- if our local office managers (and all the people who lean on them -- from higher level administrators in their own agencies to welfare and other agencies) want to know about the age and race distribution of current unemployment by local community merely to write a plan of action, and obtain an appropriation -- let's think several times before recommending a multi-million dollar expansion of the monthly household census, or many costly special censuses.

But if we really need such data (and well we may) in order to mount intelligently conceived manpower programs based upon what we might call the "universe of need for manpower services", possibly greater efforts to obtain current, localized economic data would constitute a better investment than engaging in a practice that one of our Bay Area managers call "manufacturing figures" the other day.

And finally, there are various items or fields of information that are not demographic in character, or quite so specifically related to labor demand and supply as those I have listed which the managers say they need and do not now receive in sufficient quantity or quality. Some of these needs require more research activity at higher levels than the local office. In other instances, merely the existence of an efficient review and library service to bring valuable items to their attention would be enough.

As examples, the managers cite a need to know far more than we do at present about relationships between jobs. In an era of change this need is understandable. They also want to know more about tests and test development. They want to know more about internal labor markets. What are promotional possibilities in various occupations -- what are the career ladders? They want to know more about technological change and its effect on occupations. Why weren't managers alerted sooner to emerging occupations such as inhalation therapist? Why don't we have more of a clearing house for such information?

Managers also want to know more from the schools. How are curricula changing? How are admission standards changing? What are the post graduation plans of high school seniors? What schools train for what occupations? They want to know very much more about information that could be considered peripheral to labor market information -- that whole gamut of services which must be offered to certain of the disadvantaged before we even think about conveying job search information to them. I could go on and on as to what we are learning about the needs for labor market information, but I won't.

Just to "get things rolling" I have, however, asked certain of our conferees to talk to you about their needs for labor market information before we proceed to a general discussion of this matter.

Barbara Kirk

I guess I should start with telling you that things are different even at Berkeley these days. The Counseling Center for the first time in many years is swamped with students, even freshmen and sophomores, who are so concerned about their vocational futures, that they are coming in at this time to ask for help in occupational and vocational planning. That has not really happened at Berkeley where career has been a 'dirty word for a long, long time. Many of them were not able to get jobs this summer, and were sitting home with parents and without any spending money. That is a powerful motivator to get in and think about what one is going to do with his future and also with preparing himself. So we are really swamped now with student demands for vocational counseling.

We are very strong believers in occupational information. We have perhaps one of the best libraries in occupational information of any counseling center in the United States. We have a full-time occupational specialist who is a consultant to our staff, who interviews and consults with students, and provides library materials for them as they need them.

And you will also be interested to know that just this week a girl came in and said, "I'm in the social sciences. What I want to know is what occupations are going to be open to me?" Such a question marks a real change.

I, perhaps, have a few iconoclastic things to say about labor market information on various occupational classifications. Margaret has already very well said that the kind of information we need is time limited. We are not limited, though, as to the occupations we deal with at the Center, as we have a public program on a cost-free basis and see the entire range of

occupational and educational levels in our counseling program. What we most greatly need is local information, even as schools and employment offices need local information more than the national picture.

But we really need relatively little of the quantitative information we have been talking about mostly so far. Each individual needs only one job. The crucial point in counseling is that it must be the one right job for him. In that context it does not really matter if there are fifty of these jobs in the community or 5000. From a counseling point of view, what matters is what is in a person so that he can develop himself to the fullest on his job. It matters that he opts for the job which best synthesizes his interest, his aptitudes, his personality characteristics. And all he wants is the one job which will make this possible. So from a counseling standpoint, at whatever the level the counseling is given, be it in continuation school, secondary school, junior college, college or university, the kind of occupational information we really feel we need is considerably more sophisticated than we have been talking about today.

What we need to know is what are the functions of the various occupations. And we need it in a different way than ' presented in Part II of the DOT. We need to know in more depth for more specific occupations and professions what their requirements are in terms of qualifications. We need to know what the functions of these occupations are in terms of the activities which the individual who enters them may be undertaking. We need to know further, . . and in advance (this is very complicated and difficult), what changes are coming about in professions, in occupations, in activities. This involves what the functions are going to be when jobs change or are split, broken down or are otherwise altered. We want to know how we can really help each student in terms of putting his committment into those activities for which he has particular abilities. So we really need to know quite a bit.

An example of what I mean can be drawn from the biological sciences. Five years ago, a student could go into the biological sciences if he had no particular aptitude for mathematics. As you may know, the stiuation is totally different now. The biological sciences at any level, or of any kind, are really pretty well closed at this point to a person who is not strong in mathematics. This is the kind of information that students at all levels need to know in advance.

In our public program we saw a man recently who had gone into an airline several years ago and who is now extremely disillusioned, dissatisfied, and vocationally maladjusted. What he was unable to predict when he entered was the change in the employment situation of this industry which has occasioned a lack of upward mobility in his activity. So he is stuck at an entry level and he now has an entirely different kind of opportunity than he was aspiring to during his preparation. His job changed in terms of upward mobility and that is the kind of occupational information we need in advance to be of service. It is not the number in an occupation or the projected number, but descriptive information about occupations, the way they may change their patterns of advancement and opportunity and ultimate goals in relation to their beginning and intermediate goals that we need to know.

So far today we have not talked about that great intermediate factor--education. That is really where the gross kind of occupational data, the quantitative data are most needed -- not in counseling, and probably not specifically in placement. In these, again, each applicant needs only one job. But in education -- and I am talking about the vocational, the commercial, the technical programs in the secondary schools, the continuation schools, the terminal programs in the junior colleges, the semi-professional, managerial, and technical programs in universities, for all of these programs -- what we really need is the kind of forecasting of labor market needs that will dovetail and integrate our educational and curriculum planning with the projected market needs of the future. And these projections must be quantitative and they must also mesh with the breakdowns and changes that can be expected to occur in occupations.

Maury Gershenson

I would like to affirm the assumption outlined by Margaret that the kinds of data needed by local offices would satisfy many of the needs of outside users. By "outside" I mean users other than those who need data for placement or for counseling. I mean those who need data in the real live world for a variety of other purposes. I am speaking now about labor market information in its broad sense, not just occupational data, but also data about such matters as unemployment and what goes with those data. I want you to know that I speak from the point of view of one who was a user for many years, and for many years a producer, and now I am back again as a user. And I am working with clients who are users.

There is a great demand among such users for data describing small geographic areas. We have a great deal of information at present for large areas, but the users for the various purposes I will outline need similar data for small areas. And if local offices had it for their areas, and they say they need it, these "outside" users would have small area data too.

I would like to list some of the uses of these data by outsiders as I recall them. We need these data for industrial development purposes, plant location, office location. One of my clients told me that they had difficulty in knowing where to put a suburban office because they could not obtain adequate data as to where they could find the kinds of labor they needed. We need these small area data for transportation studies and planning, for housing studies and planning, and for ecological studies. We need this kind of data to make better labor force projections and better population projections than we have been able to make. We need these data for better corporate and government planning and for personnel planning. And I certainly want to say "amen" to all that has been said for wage rate information; we just do not have the kinds of data needed on what is being paid for what kind of jobs.

I would like to say that what we need much more of is a look at "what's inside the package". By this I mean we must go beyond aggregates and averages. We must know more about individuals and their characteristics. Far too much of our data today are in terms of averages and aggregates.

Nansi Corson

When Margaret called me last week and asked me to talk to you, she said I need not prepare anything. I just want to assure you that I did not. But, I do have a list of our needs. In fact, I could underscore what Mrs. Kirk said and stop right there. There are some days when I think I know what our needs are. There are other days when I am quite sure I do not. And yesterday was one of the days when I was positive that I did not know what kind of information we need. I found myself facing a 49 year old man who was a dropout from high school in the ninth grade, whose working life has been spent largely in construction and machine shop, and from both of which fields he has been eliminated because of physical injuries. He may well have emotional problems. He has been admitted to the University of California as a result of winning a scholarship in a Skill Center. He is now registered in the College of Letters and Sciences in order to make up his mathematical deficiencies, hopefully, with the prospect of graduating with a Masters Degree in Engineering. He will be 54 years old at a minimum, if and when he does all these things. And his question was, "What is the field in which I am most likely to get a job five or six years from now?" If that is not a sufficient challenge to those of you who are in manpower forecasting, I could mention several other situations -- such as the one affecting engineers in 1948 and 1949, the oversupply of geologists and scientists in some other fields in 1957 and 1958, the current deplorable situation in regard to the technical Ph.D.'s and the most recent situation involving an overpopulation in the Graduate School of Business.

At the college level we do not even have a good directory of job titles. There are some occupations, certainly, a substantial part of the occupations with which we are concerned, that are also in your Dictionary of Occupational Titles. This is an 800 page volume, maybe a fourth of which might apply to us. The first encouraging note in the direction of meeting our need is something that is being done by the College Placement Council. It is still in the pilot stage, and, hopefully, it will result in a college edition of the Occupational Outlook Handbook or the Dictionary of Occupational Titles. But we start out without even a good list.

Certainly, the spectrum, or the environment, within which college placement and counseling is practiced is vastly broader than that which you speak of when you talk about local offices. Our "environment" at Berkeley is the world, literally, with over 60 international recruiters using our office. Our input, also, comes from the world and includes our 3,000 foreign students. We desperately need this descriptive information about jobs that Mrs. Kirk is talking about. We do not even have as good a terminology as you have. What do I mean when I say occupational descriptions? I am not even sure, with our labor market so changed. We have just been through 25 years when the supply of jobs was not our problem. Now, we may be embarking on a whole new era. We need some expertly done, objective, accurate, comprehensive descriptions of functions in which the college graduate engages, and the industries in which those functions are performed. Many of these occupations are not as easily definable as a typist, or a machinist. And our own terminology is still inadequate. We need these kinds of descriptions for old traditional occupations, because they are changing. We certainly need them for new and emerging occupations.

Because we deal almost exclusively with youth, we are faced with a frightening gap between what the new graduate sees, hears, and reads in the media about ecology, environment, sociology, and perhaps the obsolesence of some types of technology. He is looking for a job where he can take what he has by way of training at this point in time and get in. As an example, when the first of the government funding came through under President Kennedy for the new community development type programs, and the new counseling programs, the job openings we received called for 5 to 10 years of experience in something that had never been done in that context before. And on this side, we had a hungry mob which was inspired with these concepts, concepts which this generation is having the opportunity and the leisure to give a great deal more attention to than did our generation.

We certainly need better forecasting. How we are going to get this short of labor allocation (which certainly is not compatible with the principles and philosophies of our democracy) I do not know. But these gaps have to be closed somewhere along the line.

Don Mayall

I was asked to speak on the needs of the poor for labor market information. I do not know what their needs are, but I have some ideas on how to find out.

I sense a problem and I cannot quite put my finger on it. But I propose to take a bit of a departure from talking about needs and move a little deeper into the process. Maybe I can work around the problem that I sense.

I used to be a purveyor of labor market information. I used to be a labor market analyst. I used to worry about what the needs of the users are. Since I stopped being a labor market analyst, I have been a user and I have worked with counselors.

I like following on from two people who have worked directly with job applicants. I spent the last three months working with counselors setting up an experimental counseling program. So I have a sort of feeling of standing between the purveyor and one of the users. I got interested specifically in the issue of the user when I was a labor market analyst. One of them who left called me up one day. He was black. He had gotten a job writing a book for one of the knowledge industry firms that was trying to crack into the relevant labor market field. He was writing a book on the "world of work" as seen from the ghetto. He called me up and he said "I have hired as consultants some dropouts from a high school in the Fillmore. Can you come down here and put some of your ideas about the usefulness of labor market information into action?" I kind of gulped and said "I guess I'll have to try." So I went down and spent about two months in pretty heavy sessions with a group that ranged from three to seven in number. They were all under 20 years old and they were all male. Let me briefly outline for you the ideas that I had when I went into the sessions.

I have my own model of how the labor market works. I suppose it is a system, but I would like to pose it in contrast to the systems concept proposed by both Dr. Crossman and Mr. Shiigi. I think it is more heavily psychological. And it is this: The world of work is a very salient construct to everybody regardless of who they are or what they do. Everyone has a set of perceptions about the labor market which is organized and meaningful and is based on his own experiences, the experiences of other people, what he reads, and what is said to him. It forms early and it gets structured and put together. Once organized, new things are perceived in terms of the framework already there. The view of the labor market analyst is different from the view of the world as seen by a person who lives in the ghetto, for he has a different set of experiences. He will accept information as true and will reject other information as not credible. The counselor who is working with such a resident has a view of the labor market which again is a function of his experiences. If a counselor has had only one job in his life (and that a civil service job he got after college by taking a civil service exam) and his general notion of economic theory is that inflation is a phenomenon that is caused by the militancy of unions, then these things will structure the way he views other information that filters in. He may see many, many people and this will add inputs to his information, but his own set of perceptions is formed and he is screening through this kind of information.

I went into this counseling process feeling that I had a better view of the job market because there were lots of different sources of information that I was getting. I was getting all the sources that we have been describing: current information on every industry, forecasts on industries fitted into a general framework of growth in the GNP, changes in industries, location of firms, wage rate data. All of this I built into a model through which I could interpret changes in a given industry or what the implications of these developments would be on different occupations, what effect there would be on the degree of competition for particular jobs. It was, in effect, a model so formal and rationalized that you could put it on a computer and, in fact, I have. I thought that this was a better view of the labor market than the idiosyncratic one because it had a lot of inputs, because it had a comprehensive framework that held it together, and because it was subject to objective verification. If, in fact, it was known that the finance industry was growing in the San Francisco area then you ought to be able to tell somebody to go and ask for a job.

In the ghetto I found that by far the biggest problem was one of communication and that, in addition to everybody having a view of the labor market, they also have an orientation toward that view. Some people are satisfied with their relationship to the labor market, and no amount of informational inputs are going to affect their need for information. Other people seem to have two sets of values. They seem on the one hand to feel that they do not need information, but they are dissatisfied about something. So at least there is a basis for presenting information and some kind of interaction process can take place. This interaction process may strengthen the one set of views, so that they then begin questioning other things. Then they can look at the information you have given them in terms of these objective ways of verifying it, like calling on the employer.

Finally, there is yet another problem that occurs in the communication process. That is the different motivations between the person who is giving the information and the person who is there to get the information. The counselee may have a clear view of why he is there. If it is to get information, that may be his motivation. If it is a program under which he is receiving a stipend for being in the program, that may be his motivation. He is going to wonder about what the counselor's motivation is in providing him this information free of charge. These kinds of things are barriers to the communication process that the counselor has to overcome.

Up to this point we have been concentrating on the counselor or the placement officer as though they were the consumers of the information. They are not in the manpower system. The person who is presumably the job seeker, or who is considering going into training, is really the consumer. And it is very hard to find out what the demand is from him. Everything we have been doing is speculating.

John Daley

I really haven't formulated what I am going to tell you at this point. I was told that as a byproduct of our recruiting and examining functions we produce information that might be useful to you. I am not sure what specific information that is.

I think of us more as users than as producers. But I am sure that we produce a great deal of information.

I would like to tell you a little about our role. As far as being users, we are dealing entirely within the framework of the federal government. We survey our customers (in the Bay Area we are talking about 12 counties) twice a year. We go out with a manpower skill survey and find it an imperfect measuring device to determine agency needs. At the same time the Commission is surveying agency headquarters in Washington and they tell us that their sources are imperfect also. I think that the reason is that budgetary considerations are the dominating principle here. We are currently faced with an immediate need to recruit somewhere over 2,000 people for positions in the Bureau of Customs as Customs Security Officers. They are to participate in the Sky Marshall Program (to ride shotgun on the commercial airlines to protect against hijacking). We had no idea in the field that this would occur. And now just within the last week we have gotten information about the numbers, the sources with regard to examinations, and what we should do about recruiting for these positions.

The philosophy within the Commission in the last few years has been to establish an open examining system whereby anyone can file for a federal job at any time and at any place. So we have geared our examination on this basis. This practice goes counter to the fact that we are no longer in a tight labor market. How do we control this situation? We try to control it to a certain extent by the amount of publicity we distribute. We are not out feeding information to the newspapers and publicizing our jobs throughout the area. On the other hand, we are maintaining open announcements and examinations on a

continuing basis for a limited number of positions, and we may even have to change this because I do think we have credibility problems with the public.

We have relatively poor long range information on manpower needs, but we have excellent short range information in that all the positions to be filled in the federal government in our area are filtered through our office. In other words, we have done the examining, we have rated the applicants, and we have set up the registers or lists of eligibles. Then we wait for the agency to come up with a need and we refer the eligibles to them. We have a job information center in San Francisco and we handle somewhere around 250,000 inquiries a year. Within our region we have information points in San Diego, Los Angeles, San Bernadino, Sacramento, and other localities. The Commission itself is rather a small agency with a relatively small number of people, but we are the focal point for all federal employment in the West.

Curt Aller: When we go out to a public employment office we get a picture of the way they do business now. In this sense, then, the local office becomes a passive supplier of information to those who express some kind of need. We could turn it around and, instead, ask the question, "What should the local office be doing regarding the improvement of the operation?" Rather than being passive, can it develop a perspective that looks at the imperfections in the operation of the labor market? What is the kind of information that would enable it to play an active role in reshaping a certain portion of the labor market so that the overall efficiency of that market is improved?

I think it would be possible for a local office periodically to take a look at the job training of people coming out of high schools. It could report when the school system is failing to produce the kinds of skills and knowledge required for most or a portion of its graduates or dropouts to move readily into a labor market. And, in effect, it could pinpoint that as a problem area and then follow on with some prescriptions that may be required.

Or to take another example, various people have been dividing labor markets along the lines of primary or secondary markets, or of protected and unprotected markets. There are wide differences in the quality of work experience as between these two markets. I would find it intriguing if the local office could through its information system provide a map of the local labor market and say, "Here are the preferred areas; here are the routes of entry into them; here are the patterns of moving up in them." And they should look at the unpreferred areas and begin examining the characteristics that make them unpreferred or secondary. They might begin the process of finding out how structure could be put into these markets which would give them the primary characteristics. For example, if you report job opportunities in a specific area, and the turnover is 50 to 60% every six months, you have a signal of real inadequacy in that market. If you focus on occupations alone, I think you are missing. You are unable to move from the basis of occupations to looking at the labor market in all of its integral pieces which are separate and distinct and which ought to be looked at in terms of their functioning and the

differences between them and how these differences may be manipulated or influenced so that the performance of that market meets expressed and human objectives and the needs of the population.

Margaret Thal-Larsen: That is a very good contribution. In a way you are suggesting that an action program should be latched onto our current discontents. I have never heard one of your points expressed more eloquently than by the local office managers and by private employment agency managers. To quote one of them as nearly as I can, he said that the schools are responsible for the "wreckage that is being deposited on the doorsteps of employers and employment agencies these days". I heard this point raised rather often. And then a number of reasons for the situation could be ticked off: The total unfamiliarity of the world of work in the schools; the failure to arrive at any consensus as to what should be the content of that basic education which is needed on any job,or for continuing success on a job,after a worker's initial entry; or the school's failure to fit students for that first job in terms of any of the qualifications then extant in a community. There was much comment as to the fact that there must be information in the community: some gathered from employers; some, their own judgments; and that, somehow, this information would miracuously get back to the schools. However, there was never any pointing out of the pipeline that would take this information back. There was certainly no assumption of responsibility on the part of any local office manager, no appreciation that he might have a role here. Very frequently I heard the remark that with their diminished resources the contact they had with schools was less these days. Comments from counselors we interviewed indicated that any capabilities they might have had to get into the "world" and learn more about it were diminishing.

Maury Gershenson: I don't see any inconsistency in what Curt suggests and what Margaret has been talking about. If such action is to be undertaken by the local office, we still need information. I think that is what we are talking about today -- information. Of course, the information is needed for a purpose. It has to be used. I think we should determine the kinds of information that will be needed for their action.

Curt Aller: Maury, you made a point. I think what I am asking for is either additional information or, at least, putting that information together differently. Somehow we need a quantitative appraisal. Then, the next thing to do is to draw some judgments. We need not so much an action program involving individuals, as a continuous restructuring of labor markets based on the interaction of schools, counselors and the market. If we make this too micro we are missing the possibilities of using the data in a truly creative way.

Margaret Thal-Larsen: Maybe we should have started our discussion with a better definition of goals.

Joseph Epstein: Curt is really saying that the Employment Service ought to expand its area of work beyond just placing applicants in jobs. It should really begin to analyze the local job market and become a real factor in how that job market is structured for the benefit of the school graduates.

It should also look into how these institutions prepare people for the job markets that are coming along with the hope that the kinds of job markets that we presently call "not preferred" will, because of the kind of analyses we could give, in time become better markets than they are today for the kinds of jobs that will then be available. I think this brings us to a point which I would like to put on the table. I think that the labor market information person in the local office should no longer be just a prisoner of what comes from Washington by way of reasonable or unreasonable demands to be met tomorrow or yesterday. Also he should not be just a prisoner of the operations of his local office. He should be raising his horizons in the direction of becoming a real factor in analyzing and knowing the local labor market's characteristics. He has to face in two directions. Obviously, he has to provide service for the legitimate needs of the office. But he also has to understand enough of the market to be able to feed to Washington the kinds of data that will make it possible for decisions to be made which, having been taken, will affect the local office in some beneficial way. After all, what happens in Washington and on the Federal Reserve Board in terms of interest policy or open market operations, or what happens in the Council of Economic Advisors in advising the President as to various expenditures is, to a great extent, influenced by exogeneous factors such as military expenditures. And to a great extent it is the product of what people at the Washington level think is necessary to produce better employment conditions around the country -- a subject to which the local offices can contribute much.

Walter Postle: I disagree with you entirely! Basically, the problem in our system is that for too long we have suffered from the so-called "information system" we have now, the crazy demands coming down from above. And we have absolutely neglected the needs of the people at the local level. What does Mrs. Corson need to run the Placement Center on this campus -- information. I think it is possible to put a program together to get it. The same thing is true at the local office level, at any kind of local office, whether it is an unemployment insurance office or an employment service office. I think it is possible to nail down rather specifically, given the goals of a particular program, the informational requirements and the informational structure needed. The problem in our system is that for too long we have ground out all sorts of data, but we haven't ground out any information.

Joseph Epstein: I was not arguing that the only direction which a labor market information program should have is to Washington. They have to do their regular work. But the people in Washington have to be given the tools to do <u>their</u> regular work. I also think that unless employment service people at the local level are prepared to take on a decategorized program, they will not be able to do their work efficiently or to provide the kind of feedback which will ensure that our programs have the kinds of funds which will enable them to do the job right. Nor will the local offices be able to justify the programs we all think are necessary. The critical person in the local office will be the one who can compile the information which will convince Washington that our programs are useful.

Walter Postle: Given our present state of resources, too much is going upward and not downward.

Ed Heler: I am disturbed by the idea that the information the local office needs may amount to most of the information others need for their operations. I think this puts too narrow a parameter to a labor market information system. I am very disturbed by our lack of resources, but I am also concerned that the local office of the employment service is not the place to do this job. The employment service is a user, a generator, and it can be a disseminator of labor market information. But when we start talking about a "labor market information system", we are concerned with components of a very broad system. If we are going to start talking about local office needs, we are getting very narrow.

Dennis O'Connor: What kind of labor market information do we need? We do collect a lot of data. We have to decide which is information and which is not. And we have some criteria for this decision. My understanding is that your way of going about this is to go out and ask people what they need.

Margaret Thal-Larsen: That is only the start of the process.

Dennis O'Connor: Mr. Mayall commented "They might not know". And I think that he is right. Local labor market information is useful for some things. We look at labor problems and we see that some problems are short range such as unemployment. We have other labor market problems, placing people in jobs over a longer period of time, and that is a distinctly different problem. Are we assuming that the local office needs this kind of information? Or are we assuming that we should be building this information at the local level? I'm not really sure that we can do that.

Margaret Thal-Larsen: I tried to point out that for certain functions presently being performed by the employment service and by other organizations, it is essentially short-run information that is required. Some of the short-run information we talked about is associated with searching for a job or with placement, depending on the policy or practice involved. There is also the longer-run type of information, "job prospects" information, which because of all the hazards imposed on projections by a free economy we must try to produce as best we can.

Walter Postle: In many manpower agencies short-term information is their bread and butter. Even in high school placement offices you get kids coming in who need current information. In many cases when people come into agency offices they need a job. They are not looking for information per se, but they will take information as second best.

E.R.F.W. Crossman: We seem to be getting the two kinds of utilization of information confused. The present employment system can be thought of as having a fixed pie which it can divide up into various activities. But it can also put energy into persuading people to give it more resources. Mr. Epstein's plea is for more of the resources to be used in feedback to escalate the amount of effort going into the service as a whole. Part of the plea that he raised is for information to be developed not for on-line use but for resource generation.

Joseph Epstein: What I had in mind was partly that. But the purpose of getting additional resources is to take care of the additional possibilities for the employment service. I think no one today has really got a lock on the expanded responsibilities at the state and local levels with the degree of sophistication one needs to carry on labor market activities in the future. I think it is only in the last few years that manpower policy has incorporated the notion that you must do more than just give a guy a job. Labor market information now has to serve many purposes. It strikes me that where our responsibility lies in the final analysis is going to be the result of empirical examinations as to who handles them best. I would say that because of the roots that our organization has, the local area employment service is a good place to start from.

Ed Heler: If we are going to design a system, I don't want us to be tied down to the employment service. I would like to find out what the demands are, what the needs are, what the uses are, and what the priorities are for information. And then we should find some way of melding that with the sources we must have in order to arrive at a feasible process of securing information, putting it in the format in which it can be used, and getting it to users at the right time. At that point, if the employment service turns out to be the logical vehicle, fine!

Maury Gershenson: I'm sure that we didn't imply that the collection and dissemination of information necessarily had to be done in the local office. Where it can be done best, that is where it should be done.

Marged Sugarman: The local office wants to know a great deal more about job opportunities. But how are you going to get the placement or the claims officers to switch from the job matching function that they have been performing to one in which they will need a wider view of the labor market? They wouldn't want to get into any long term analyses or forecasts. On the other hand, there has to be some kind of coordination in any design of a system. We are talking about several different levels of work. We need some kind of system so that people at different levels are furnished information that meets their different needs.

Joseph Epstein: I am not sure that I used the term "local" office correctly. I didn't mean that each city has 20 local offices, each of which must be engaged in research. Secondly, I am not certain but what in a city the size of San Francisco there should be one locus of interest as to the long-run prospects for jobs in San Francisco. We are not certain what the organization of a system should be and what it will be doing. We have not developed the infrastructure within the employment service to do all these things.

Walter Postle: I think there has been a massive vote of "no confidence" by vocational educators in the ability of the employment service to provide the sort of information they want. There is something called the "Vocational Guidance Information System" which is being put out by Santa Clara County. We have come across things like this where the school are attempting to provide an information system of their own. We find other agencies who want to get this information themselves.

Irwin Wingeard: Are we talking about a labor market information system as a whole or are we talking about that piece of it that the local employment service may provide? If we talk about a labor market information system as a whole, then I think this involves inputs from many other organizations and institutions in the local area. And perhaps it involves many other uses that we would not envision if we were limiting this system to the employment service. A very crucial point is the fact that not only vocational education but many other organizations and institutions are attempting to supply this need for labor market information. There is a desperate need for some kind of coordination. There is a lot of wasted effort and resources which could be marshalled and run through some coordinated system. Then we could accomplish a great deal more in providing satisfactory information for a local area. I don't think that the employment service is going to be able to manage the entire job. There are going to have to be many other organizations that will have to participate. But who will handle the major role will have to be settled.

Margaret Thal-Larsen: I think I am best qualified to answer one question, "How are we responding to the problem you have described in the project we have undertaken?" We are certainly concerned with the needs of the whole area, with the information needs of the entire community, not simply with the needs of the employment service. We are concerned with the entire community both from the standpoint of information needs and from the standpoint of sources of information. If we survive our two initial investigations, we may then be in a position to design some system where we can begin to talk about administrative matters and about which organization will do what.

Steve Laner: I was hoping that Ted Crossman would make a renewed pitch for keeping the distinction clear between data and information. I think it would help us a great deal if we did keep this distinction in mind, because you can get very different types of information from the same set of data. I think what you are indicating in many instances is that by using the same type of data and by employing appropriate types of processing you can satisfy the needs of a series of different agencies.

Gordon Cavana: Because I was part of the previous study of Margaret's, I agree with her assumption that the local offices and the schools and the private employment agencies require the same kind of information. However, although the schools do need the same kind of information, they need it in a different way. The employment interviewer is going to be talking about existing vacancies in terms of placing a person immediately. The school counselor is going to be talking to 10th grade students and he has to know about current hiring. If he knows that, he may be able to build in a forecasting mechanism. If he succeeds, he will try to convince students in the 10th grade to get the particular kind of education or skill level they will need to get a particular job. Giving high school seniors this kind of labor market information is a colossal waste of time. It's too late. One of the things that educators require is specific requirements. How much mathematics do you need? What level of reading do you need? What level of science do you need? There are other things that school counselors require in order to predict, not the existence of a job, but the educational level which a job will require three years hence. It

is too late when you tell a college graduate that, "Somewhere along the line you should have taken a year of statistics. You could have gotten a job but for that." This kind of information about present and future job requirements is the kind of information counselors and educators need, but they will be using it differently from the employment offices.

THURSDAY, 5 NOVEMBER 1970 -- MORNING SESSION

Ed Heler

We are going to have a panel today on the "Sources of Labor Market Information". I will pick up somewhat on the discussions of yesterday. To orient you to my way of thinking, I am looking at this subject from the point of view of a Chief of Research and Analysis of a state agency who has been in the position of having to produce a certain amount of information; of being a user, a generator and a disseminator of information; and, very often, one who scrambles to find out what information is available to meet somebody's specific needs. I have devised in my own mind a system which I would build on the ideas Dr. Crossman put before us yesterday.

But let me say one thing. The word "local" disturbs me. "Local" in my terminology means one office stationed in a specific area. I don't believe that we have local manpower information or local labor market information in this sense. You will see me skipping between labor market information and manpower information. I am talking primarily about area information. An area can be an SMSA. An area can be an area of a state or a county. The information system that I have been attempting to develop in Arizona has been on an area basis.

I have evolved a model of an information system (see Figure 5). I find it very difficult to talk about sources or supply of information without considering some of the users. I have always considered there being some function or organization which serves as the labor market information processor. The labor market information processor feeds a number of uses. The first is legislation and policy formulation which is a major concern of the Manpower Administration. Another use is information needed for program planning and development. Within the employment service at the operational level as well as the education system, labor market information has uses in guidance and counseling. At the operational level it also has uses in terms of job development and placement. We serve the educators and trainers. We produce labor market information for purposes of administration and evaluation. A tremendous use lately has been in terms of the internal labor market, through assisting employers in adjusting to changing job market conditions, changing labor demand/supply conditions; and in attempting to influence them to use the labor supply that is there. Another area is economic development. In my frame of reference these are the users of the information, representing the demand for information.

Now to meet this demand I have been able to differentiate four different sources of information. It is not really information as such; it is data. The first source is "household" data which gives us data about demographic characteristics. These data are produced by the census, the current population survey, or any type of population surveys an individual agency would carry on. The second, "employer data", include the occupational distribution of employment, employment statistics, wage rates, hiring practices, job requirements, or job descriptions. The third, "economic activity data", is

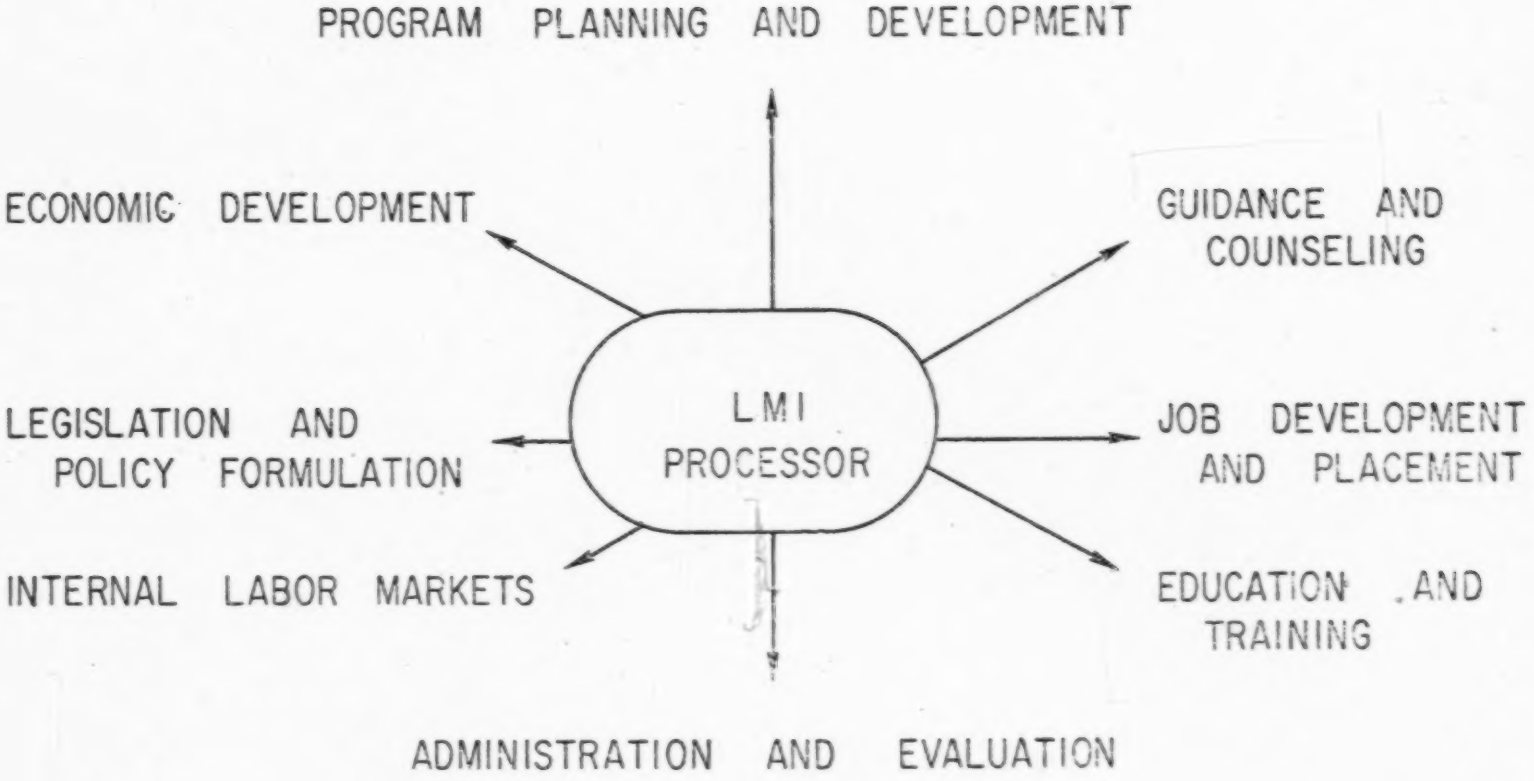

PROGRAM PLANNING AND DEVELOPMENT
ECONOMIC DEVELOPMENT
GUIDANCE AND COUNSELING
LEGISLATION AND POLICY FORMULATION
LMI PROCESSOR
JOB DEVELOPMENT AND PLACEMENT
INTERNAL LABOR MARKETS
EDUCATION AND TRAINING
ADMINISTRATION AND EVALUATION

FIGURE 5

generated in the employment security system in terms of the unemployment insurance program and of hiring activity. Finally, there is "agency data". This is developed through the operating activities of employment security, educational systems, health and welfare organizations, and that which is produced by virtue of different public and private organizations serving the community. Most of those here represent agencies, and we will probably be concerned with agency data which come about as a result of our operations.

In my own experience I have drawn upon a number of sources to meet specific requests for information, or for data in terms of our overall program. I have drawn upon federal sources for census data, for national economic data or economic trends. I have drawn upon the social service agencies at the federal, state and local levels for health and welfare data describing the primary characteristics of individuals. I have drawn upon the civic services such as housing organizations, transportation, community planners, licensing organizations, tax organizations and law enforcement for both economic data and population characteristics. I have drawn upon the business community for a whole variety of information, primarily for employer-type information or for occupational employment information. The education agencies are a tremendous input. We can't do without them once we start talking about the total labor market. We need information about whom they are training and in what occupational capacities.

When we look at an area manpower information system and attempt to evaluate it, I think there are four basic questions that have to be answered. First, what data and information is generated in an area which can be used in a labor market information system? Second, I think you have to address yourself to the question: "How is it generated and is it compatible with other data?" Third, we must also examine it in terms of the needs for information and data. What is not now being generated and who should be responsible for its generation? Where should we go to get it? And lastly, since we are all somewhat independent, autonomous organizations, how shall coordination between the various generators be achieved?

Sherrill Neville

I am still a little shook from the discussions yesterday. Never in my life had I thought I would attend a session on employment security information and be confronted with the description of a UI branch of the Service running an employment service. Of course, Don Mayall's psychological approach to our problems is very pertinent. I am sure I have weaknesses and I am sure Utah has a lot of problems. I think that one of the big problems is the local office delivery system. We have probably been stronger on central office state statistical data then we have in the local areas. I think I was called on first because Utah was selected as a pilot state to test out a computer job matching program using a third generation mass storage and random access system to actually match workers with jobs. The capability is there and we have been working on it for three years.

Briefly, we take work applications on all applicants when we take their claims. We are a wage request state; a request goes back to the employer for

a wage history and these two documents are put on punch cards and are entered into the computer system. A number of factors are pegged such as age, sex and occupational code assignment (nine digits). Job orders as they come in are coded in similar fashion and there are numerous ways of handling the geographic problem, the problem of breaking the job search area down into more and more detail. About all I can say is that it does work. The system is expensive but I think the expense is justified in terms of being able to evaluate its exportability to other states.

The sources of information in an Employment Security Agency are fundamentally based on unemployment insurance data. The information is available if these data are properly used. For example, the new UI bill carries a trigger formula that operates on a state-by-state basis to inaugurate extended benefits whenever a state's insured unemployment reaches a certain level as a proportion of a prior year's 13 week moving average. This information is also available on a local office basis. You can go from state figures down to local office figures. We not only publish a monthly newsletter, but also a weekly letter on the state and for the three major offices in Utah. This newsletter is fundamentally geared to a weekly time span for claims filed and job openings received, together with a qualitative discussion of what has happened to the labor market in the previous week. But fundamentally it is based on an unemployment insurance foundation. Similarly, we are required by law to collect a contribution report from all covered employers and this is also entered into the computer system and is available on an instant recall, just as we can get instant recall of a worker's application.

We are conducting a very interesting experiment with this employer file. Thanks to our BLS cooperative program that we have had for many years, we have used a lot of the BLS funds to improve our non-covered employer file. We hope to get other employer data in the data bank such as that taken from the BLS sample and the employment service visiting program.

We have been working on an occupational matrix since 1947 and, rather than using the census with its occupational and industry setup, we have used the SIC industry codes and the nine digit DOT occupational codes. A very interesting thing we are engaged in right now is an attempt to pin down employment by establishment and by street address location. We feel that our computer capability will permit us to provide employment by small area.

I would like to end by mentioning another unemployment insurance base for labor market information. This has to do with our actuarial forecasting. We are required by law to gauge our unemployment insurance reserves by our future estimates of unemployment. In order to do this you have to make projections. We have been able to set up an eight year forecast which is updated every four years so that we can get a fix on cost estimates. These forecasts, I am sure, could have a lot to do with delivering labor market information that is needed in terms of future occupational needs and industry trends.

William McCreary

I represent the Department of Education in Sacramento. I want you to know that in contrast to many kinds of organizations and agencies, the schools are not so uniformly organized and operated that they produce a uniform product. This means that is is very difficult to generalize as to what goes on in the public schools in a given state or in the nation. What I have to say will have to be considered against the background that there is a great deal of variation in both quality and quantity of the organization and production of labor market information from the point of view of the schools. The two primary factors responsible for these differences are people and courses. The public schools make more demands and have more needs for labor market information than they constitute a source of labor market information.

Let me give just a brief overview of some pertinent points in the development of labor market information by the schools. I have said that there are great variations. Some school systems are doing better than others. The better ones have embarked on a systematic and organized plan for developing a dossier on pupils that would reflect their health, their academic performance, their aptitudes, their academic strengths and weaknesses, their vocational and other interests, and, to a lesser degree, their personality traits. If all of this were assembled and interpreted and organized and transmitted to public and private employment agencies, it should be very helpful in developing a matrix. The new innovations needed to get at this tremendous problem include the data processing system that has been developed from a Sacramento base and is now being developed into a state-wide system. It is called the "California Educational Information System" and, given the resources, the personnel, and the time to develop this system, you could look ahead to some future date when there will be an electronic state-wide network. In fact it could be a national network. Information on the personal characteristics of students or graduates could be transmitted to the point where they are needed. This program is in its embryonic stage and faces many problems. But it is a beginning. It is a recognition of the need to have a state-wide system for the transmission of information such as I have been describing.

One of the problems in systematically organizing and delivering this body of information about a person entering the labor market or desiring to, or needing to, be counseled about a job, is that in the school system a pupil may have had as many as 50 or 75 different teachers and counselors over a period of 12 years. And every one of those 75 people contributed a little part of the information about this person. But it does not always get assembled into an organized system so that we can see the whole image. It takes an especially qualified person to really comprehend this job and to develop it and organize it.

Of course, right now 50 or 60 percent of the students are being graduated from an academic curriculum. This is largely the preparatory curriculum for entrance into a college or a university. Another 25 percent are in what is known as a "general curriculum". This leaves about 15 percent of the students who presumably have taken and graduated from a vocational education program. I am stealing some of these statistics from Dr. Thal-Larsen's report on the Bay Area Placement and Counseling Survey. It is a really fine contribution to our understanding of this area.

Let me shift just momentarily to the demand side. The reason I want to digress for a minute and talk about this, is that I culled some important findings from this survey that I mentioned, highlights that relate to the schools. There were some 17 Bay Area schools in the sample and a number of counselors in the schools were interviewed to find out their impressions and their needs in relation to this problem. And here I quote,

> "In answer to our direct question concerning the assistance received by counselors from the public employment service, we received answers indicating a very real diminution of such assistance in recent years. In fact, 60 percent of our respondents independently chose to draw comparisons between before and now, pointing to such reductions in service as the fact that GATB's were no longer routinely given to students who needed them and that interviewers no longer visited the schools to talk to the seniors about labor market information and to register them for work."

I am quoting this, not in criticism, but to show that the schools are suffering from a real lack of information and help in this area. The schools are undermanned and I recognize that other agencies are too at the present time. And that is what has produced this stiuation. To try and fill this need, the schools in California have developed a system known as "VIEW" (Vocational Information for Education and Work). Very briefly it is a card system using the conventional data processing or IBM card which has a small aperture into which is placed a microfilm containing four typewritten pages of descriptive material relating to a specific occupation or a specific educational institution above the high school level. This card can be selected from the file by a student and put into a reader and read by the student. Then if he wants to retain this material he can go to a reader/printer and get a reproduction of the material. This program is spreading. One source of its financing has been the regional occupational center which can be financed by a special tax levy by the Superintendent of Schools of a given county or counties. Maintenance costs of the program are often shared by the individual schools which use the service.

Charles Roumasset: On the basis of our experience you may not want to throw the word "dossier" around too widely. I say this for a specific reason. We had in Los Angeles last year what we called an "Urban Employment Survey" which was an in-depth study of employment problems in Watts and East Los Angeles. We asked questions about employment characteristics of individuals; what kind of jobs they wanted, what kind of jobs they had, information about transportation problems, about prison records, what they liked and didn't like about jobs; some very delicate information. One of the things on this 100 page questionnaire was space for a social security number. When I was explaining this form, I routinely tried to pass over this item very lightly, saying that is was in there merely so that we could try to get some information on past job experience. But many just blew up; they wanted to know why we wanted this information. They immediately had visions of a 1984 in which you had a nationwide system in which anybody could be identified. They were very suspicious. I just wonder whether you anticipate any trouble in this nationwide electronic network which is going to have an evaluation of personality traits and abilities and so forth. The same thing may also apply to a lesser

extent to Sherrill's attempt to classify individuals by street address. As an agency we have already run into some difficulties and we are beginning to feel this kind of pressure.

William McCreary: I am sure that we will have some problems. We have not had many problems so far in compiling information for the California Educational Information System. But the information we have gathered has been quite objective. It is not judgmental. A few years ago there was a concerted attack on the cumulated records of the schools. These are records that are started when the child begins school and they follow him along as the child progresses. Certain ultra-conservative groups charged that they were "dossiers" and that they were Communist-inspired in order to separate children from their parents so that the state could ultimately take over the rearing of children. But I don't see how we can make progress in this area until we are able to gather together in an organized fashion more information and data about the individual and where he tends to fit into the labor market. But there are risks we have to take

Walter Postle: I have a document called "Vocational Guidance Information System" prepared by the Education Department of Santa Clara County. It is an employer survey which has quite a number of questions on the occupational make-up of the work force. Some of the questions are: the positions currently filled, positions now open, positions to be open in three months, positions to be open in six months, positions to be open in two years. It is a tremendous job-forecasting survey plus a whole bunch of questions on desirable characteristics of employable people. The question is who is financing this?

Charles Roumasset: I might mention that there is a similar survey being done in Kern County. There are any number of other studies frequently done by graduate seminars. Who is going to coordinate this stuff? Bill McCreary coordinates it to a certain extent, but this doesn't necessarily apply to area or regional information.

Alan West

The Civil Service Commission inspects the statistics gathered so far as manpower needs are projected throughout the United States. The Commission is broken down into some 65 area offices. These are formally referred to as "Interagency Board Examiners". We now have a consolidation of each activity in each area. And we are now known as the Area Offices of the Civil Service Commission.

Staff from each area office serving a specific geographical location go out to the area's federal employers and solicit information on a semi-annual basis as to their hiring needs and the activity which is anticipated. Once this information is gathered we also have to make some projections on our own, because we find in many cases that federal employers are apprehensive about giving a realistic view of what their needs are. This is a dilemma we are all faced with in the area of manpower planning and obtaining realistic figures on what needs will be. We are more in a recruitment, examining and certification

process than we are in a statistical gathering activity. One problem that we are faced with is the fluctuating labor market conditions in the federal service in respect to defense department activities. The San Francisco Area Office has jurisdiction over some eleven counties in the greater Bay Area. These eleven counties are the primary reponsibility of the San Francisco Office, but in addition to this we do handle the Federal Service Entrance Examinations for which we hold geographic coverage in California and Nevada. In addition to primarily professional types of positions such as accountant, auditor, and engineer , we have broader areas of coverage. Also, we have some announcements in Washington, D.C.,which cover the whole of the United States.

The recruiting and examining functions we perform sometimes must appear to be unrealistic in relation to actual needs or to the placement we make. To give you an example, in fiscal year 1971 we have projected an intake of some 110,000 applications for federal jobs. We process 72,000 of these applications, and we have projected 10,000 selections. We also answer some 300,000 inquiries on an average. The problem we run into, of course, is that we don't have the same luxury that private employers enjoy. We do have to comply with a competitive system. On the average we have about a 50 percent failure rate, and, therefore, we are on a basis of continuous recruitment.

We also have another problem which has developed over the last few years. We have projections coming in from the federal agencies. We also have a number of programs that have been developed to incorporate opportunities for disadvantaged groups. A few examples would be worker-trainee examinations in which we primarily fill positions at the lower levels with disadvantaged individuals -- people who are on welfare, people who have had no opportunity to work, people who have not gone beyond high school or who have less than a high school education. The Commission is also working very closely with WIN (Work Incentive Program) and the Manpower Development and Training Act,and we are now starting to push very heavily in the area of College Work-Study Programs and Cooperative Education Programs with the colleges and universities. This all has a very definite impact on our projections.

As to the information portion of our activity, we do have a job information center where we dispense information on announcements. We have some 151 announcements open at the present time. We also provide job counseling to individuals who are not aware of the opportunities or the types of positions they can apply for. We also attempt on an individual basis to review and identify the best opportunities that an individual may apply for.

One of the dilemmas that we face is that when it comes to HRD or state employment security office activity versus federal government activity, there seems to be some reluctance to share information or to provide a meaningful exchange in the area of applicants referred and the selection process.

Nansi Corson: I wonder if there has been any resistance to data-banking relatively shophisticated information about vocations, about graduate activities. I mean such information as that about continuing graduate study, Peace Corps, Vista, the military, in other words, information which would show the entire spectrum of all alternatives open to the job entrant. I do mean sophisticated information versus just numbers of job openings. Then the student would not feel he merely faced the 1984 Orwell

syndrome. More important, it seems to me that we would preserve for the individual not only the privilege but the obligation to search through all these alternatives, as against the idea of merely providing employers and graduates with a job search tool.

William McCreary: The VIEW system that I mentioned briefly has in each of its local branches developed quite a data bank on specific occupations and on colleges and universities, information about such matters as admission requirements and the like. But I must credit the other agencies for being the primary gatherers and suppliers of information. Schools have not done it on their own. They have gone to the Human Resources Development Agency or to other sources to collect this information, and to the colleges. They have translated some of these materials into Spanish, for example, in the San Diego area. As far as I know they have done little, if anything, gathering information on the other opportunities you mention, such as the Peace Corps. Then they try to exchange information which may be transferable from location to location. But they have on part of the VIEW card the local labor market supply and demand increments that would fit their own local area such as San Diego rather than some other area.

Nansi Corson: There have been a great number of commercial ventures along your lines of data collection on individuals, all of which are going bankrupt. I wonder why with this record so apparent, and with problems such as those Mr. Roumasset mentioned, we can't get away from this idea of collecting data on people. We would be better off to collect data that people could use in making a vocational choice along with a revved-up counseling system.

Walter Postle: The only thing I can say about this possibility, the only place where that sort of activity has occurred, is in San Francisco in the HRD research unit. They prepared something called "Job Finders", which were specially geared to certain occupations and to helping people find jobs.

Nansi Corson: Of course, they do have the Occupational Guides...

Walter Postle: No, not Occupational Guides. The HRD research unit selected certain occupations like taxi drivers or bus and truck drivers, and proceeded to give specific information as to how you go about looking for jobs in these occupations. This is geared to the individual to help him with his job search. The other place where this sort of information comes out is in the JIS (Job Information Survey) program. Again the information is geared to trying to help the individual find his own job, but the amount of work we have done in this area is minimal. Very little work at all has been done in most places to describe these micro labor markets. This is primarily because research staff have stayed away from this problem.

Nansi Corson: Well, I recognize that it would have been done for jobs in the college placement field if preparing this type of information were not so difficult. One of the things wrong is that much of this information has been prepared in a vacuum, and not very well qualified people have done it. But, it is being done in industry all the time, company by company.

They turn the matter of job information over to a public relations agency to prepare it, and it is done with a sales pitch.

Walter Postle: Well, the kind of criticism that we get on most of the occupational materials we develop is that it is big on job descriptions, big on occupational outlook, but when it comes down to the nitty-gritty as to how you actually go about looking for a job and specific advice as to how you will land it, forget it. In many cases such information is the most important thing the applicant is looking for.

Ron Smith: It seems to me that one area where we have relatively little reliable information is the whole area of exploring the process of labor market entry. In particular, we know little about the relationship between existing institutions which supposedly influence that process, and the end result in terms of the choices that youngsters make or don't make in entering the labor market or entering what I would call the "sub-economy" that exists in the minority ghettos. I am wondering where and how we can begin to develop out of the data we have, and without invading the privacy of the individual, data on process, the relative effectiveness or ineffectiveness upon the whole procedure of school counselors, the public employment service mechanism, parental influence, peer influence, the social influence and the neighborhood influence.

Joseph Epstein: I just want to make two very simple points. One is to clear up the fuzziness that developed yesterday when I used the word "local". I didn't realize at the time that when I use the word "local" I use it in terms of the phrase "federal, state and local". I did not mean to go down into the individual local offices as distinct from city-wide offices or area-wide offices. In the context of my discussions, I really meant area-wide or some larger context. Coming back to Mr. McCreary's discussion on education, I just want to raise the point that we have one project in Michigan which gets to the question of how the schools, particularly the vocational education schools, are producing skills. We are comparing vocational education-produced skills versus employer-required skills. This doesn't get to how many electricians we need, but rather what kinds of tasks potential electricians are supposed to be able to master when they get an entry job. Enough employers are being surveyed to get an idea of what the local area needs, and (whether the employer is a small restaurant, a mechanic, or an electrician) to really compare what he says he requires with the skills that are produced in schools. And this project also points up where the distinction can be made between the responsibilities of the Employment Service and the vocational education system. Identifying the differences between curriculum-produced skills and employer-required skills was given to the Employment Service. How you jiggle the curriculum to actually accomodate that gap was the responsibility of the school system.

Ed Heler: One of our purposes here, of course, is to identify the sources of information and to evaluate it in terms of its utilization. I stated that in my initial model there were four primary sources of information: employers, household or demographic, economic activity, and agency or operations data. I would like to change the structure of the discussion to a consideration of these four sources.

Larry Harrington: I can describe a study that is being conducted in Santa Clara County which is a completely employer-oriented study. The people on this study are going out to individual employers and asking them what types of job classifications they use and what types of competence the employers think an individual should have in order to be employed in that job. It is interesting that a salesman doesn't always need good communication skills. In some cases the salesman will be working at a counter and the employer may want him to know more about mathematics, or just adding or subtracting, than about selling.

We are considering this study as a pilot project for the Area Planning Program. It is a new program which provides for dividing the state into vocational areas and forming representative committees to develop plans for improving vocational education within each area. We feel that the committees, in order to develop a good plan, must have some good data about the labor market in the area they cover. If we can make it general enough, perhaps we can use it in other parts of the state as well.

Ed Heler: Larry, why was it necessary for Santa Clara County to go out and do this themselves when the so-called traditional agencies should be providing this information? Were these agencies contacted?

Larry Harrington: I think they did involve the Department of Employment. But, I think they realized and recognized that most of the information about employment in the Santa Clara area was based on the 1960 census, and that the data from the '60 census is too old. There has been a complete change since then.

Ed Heler: In terms of what you are working on, do you use demographic and economic activity data?

Larry Harrington: First, I'd better tell you what I am working on. I am charged with the responsibility of implementing this Area Planning Program which provides for the division of the state into vocational areas based on job market lines. This we did. We have 12 vocational areas in the state. They are comparable to the CAMPS areas. The Bill states that committees will be formed in each of these areas to develop a vocational education training program. There will be two phases. Phase One is to develop recommendations for immediate improvement in existing programs. Then we are to develop a long-range program to cover a period of five years. My primary attention, so far, has been to get these committees organized. Then the committees will have a need for this type of information.

William McCreary: I'd like to react briefly to Mr. Epstein's comments. I think they are well taken. I am under the impression that under the newer regulations of the Vocational Education Act there are stricter requirements upon local schools applying for vocational education funds to show substantial and clear evidence of the need for training in particular areas of employment before they embark on vocational training programs. Is that the situation now?

Larry Harrington: I believe so. I think it has to be demonstrated that the plans for vocational education programs needed by local school districts are based on the job market and the proposed curricula must relate to the job market.

Gordon Cavana: Every school district which applies for vocational education funds is required to submit a five year plan to the State Department of Education. And every school district must now try to find local information which will help them project requirements for occupations; what skills they are going to teach and why they are going to teach them and what is the demand going to be.

Walter Postle: In the Department of Labor we have a major planning effort getting underway in which we are requiring State Employment Security Agencies to develop local plans. And one of the things that we are making sure of is that all federal agencies use the same demographic data. I am concerned that the Vocational Education Planning Areas may be different from our planning areas. I would like to see what these education areas are. If you are planning in the training field and we are planning in the manpower field, we should have the same economic base for our operations. And I think the Employment Security System could be of immense help in laying out the demographic and economic data for these areas so that we use the same information.

James Hanna: Generally, I think, we use the same data as you are talking about here. We have gone into the licensing agencies in the state and collected data on what the requirements are for occupations that require licensing. We have done a recent survey called the "Handicap Survey". What we have done is to survey every employer in the state as to his susceptibility to hiring an individual who is either qualified or could become qualified through training, but who is physically handicapped, mentally handicapped, or on parole. We take this kind of information and put it together in a packet in which we break our data down by local office area and by county. We will print it up and distribute it to all the various agencies in the state that might be interested. We are using our unemployment insurance files which have quite detailed information on people who have filed for claims, what their income was in the last five quarters of working. We are talking about setting various criteria for disadvantaged. We are going to utilize this file to pick out the disadvantaged to attempt to provide them with labor market information.

Ed Heler: Where is your primary source of information?

James Hanna: Our primary source would be surveys. We have a problem with the coordination of data. The Nevada agencies just don't want to give up what they have.

Ron Smith: You will have to excuse me. I have a very narrow viewpoint here. We have been involved in an aspect of this information that does not embrace the latitude you have described. We are interested in the employment systems aspect of job information. We do not generate information. We utilize internal sources such as our research and statistics section. We utilize all outside sources that we have been able to identify and

work with, such as the private sector provides through wage and salary surveys done by the various employer associations. We do not have the resources to undertake these studies, and it would certainly be foolish to do so when others with better ability have already undertaken them. A large part of our activity is in the area of exploring to see what has been done, to see what is going to be done. We have a great deal of internal information which has not been tapped as yet. As an example, we have a full listing of all subject employers in the state. We have them categorized to some degree of accuracy as to standard industrial classification. We know how many employees they have. We have knowledge of growth trends. In the past two years we have developed an automated printout arranged by counties, by SIC code and by "zip" code. Our progress in this area was held up because we lacked a legal opinion as to whether or not we could release this information to the job seeker. In addition to this, we have access to information generated by 1,000,000 UI claims per year. We have not done a very good job, I feel, of analyzing these data. But, certainly, we are working on it. We feel, if nothing else, we should be able to identify precisely the individuals with whom we do business; that we should take cognizance of their experience and be able to advise other job seekers of the experience they may have had. There have been many problems. We have a tendency to boggle on very basic points. As an example, we have discussed here the advisability of gathering information on some 35,000 occupations. This is ideally what we would like to do. If we could have infinite information, this is what we would like to have. And we know that each occupation is attached to 10, 20, 100, or 200 different industries, and that industry attachment can change wages, seek-work methods, work days, work hours and unionization. In pursuing this, I think you can imagine the voluminous body of information that we would have if we could ask for it, and have it immediately and free of charge. But we wouldn't have the capability of identifying the informational needs of an individual we might be attempting to assist. We are dealing with people who are job ready, who have work experience and who want a job right now. We don't always know how to identify this person because the DOT is not sufficiently precise. So in the JIS program we are concerned with developing an accurate, rapid, economical, and precise system for identifying the job seeker. Until that is done, this large body of information that we might be able to obtain will not be meaningful to people. So here I call attention to a barrier to further pursuit of the solution of this employment systems problem. It is our inability to use the information if we had it.

Joan Heady: We are now involved with the concept of not just placement or job development for our job-ready applicants, but in showing, teaching, and assisting them to go out and find jobs. We also are doing the usual work with applicants. But in the area of helping people to find jobs, it is not unlike what the JIS is doing. We use the JIS printout which lists all covered employees by county. We have carried this one step further in Alameda County. We have taken covered employers and organized them into communities, into reasonable job search areas, and within these job search areas we have divided them still further. We have listed the names of the employers and something about the employer when we know something about him, e.g., his hiring procedures.

Ed Heler: How do you get that information?

Joan Heady: Our information is taken from the employer account records initially. As far as the employer's hiring requirements and the like are concerned, we use our "closed orders". Also, we can make certain assumptions based on past experience. We use an occupational skill matrix which was developed from a skill survey that was done by our office. Using this matrix, we can make certain assumptions about employers in a particular industry. For instance, truck drivers; we know from our matrix that about 50 percent of the industries hire truck drivers. So, a worker comes into our office who is a truck driver. He has no hindrances, he has a driver's license, and he wants to know where to look for a job. Using the employer list and the matrix, we can say, "Okay in these industries 75 percent of the firms hire truck drivers. Here is a list of employers that you can try." Ideally, we would give him a list with the largest employers first. We can give him the names and addresses of firms that employ truck drivers in an area he wants to work in. We can also give him information on an employer's hiring practices, etc. We also get information by making direct calls to the employer. One of the things that we like to get from the employer is not only his hiring requirements, but also what kinds of people he is actually hiring. An employer's requirements may not actually reflect the kind of people he hires. Maybe he only requires a 10th grade education, but because he has an adequate supply, he hires only high school graduates.

Ed Heler: What do you have in terms of information about your clientele?

Joan Heady: In terms of getting information about our applicants? One thing, in California we are not taking applications like we used to. In our UI system we don't take applications on people who are unionized. So we don't have what we once had. If a person comes into our office, just looks around, and doesn't get any service, he is likely not to have an application on file. We do have what the JIS is putting out; a monthly tabulation of the distribution of claimants by occupation.

Gordon Cavana: I would like to mention two sources that the schools use. At the junior college level in trades that are apprenticeable, every trade in every junior college in this area has a joint apprenticeship council which advises it on the requirements for apprenticeship for junior college graduates. For the trades that do not have apprenticeship programs, they have industrial advisory committees. These are representatives who provide information about specific skill requirements and the like. One other source that is used is the San Mateo County Career Information System. They find out from the various companies and industries in San Mateo County what kinds of occupations they employ, and certain data about their jobs. They print this up and hand it out to high school students. They also include two or three names of people who are in the occupation, and if the student wants to, he can go and contact that person.

Walter Postle: Ed, there is one thing you might have missed as a source of short-term labor market information. That is the applicant himself.

Nansi Corson: This may be a good time to remember something that Mrs. Kirk said yesterday which I think is very important from the standpoint of the users. When you are working with candidates you only need one job at a time . Manpower trends, large scale manpower data are not terribly important in counseling one individual. If you have one accountant and there is only one job or no job, it makes very little difference whether there are X jobs nationally. The second thing about large scale manpower data is that is much too late. For instance, in this last turndown of the need for Ph.D.'s, it became very, very apparent to us by March of 1968 that this was occurring, which was some 90 days after President Johnson cut the defense budget by 8 billion dollars. This so-called downturn, spotty in certain areas, has continued to develop, ever since then, but the press didn't pick it up until December 1969. And the employers didn't pick it up until January and February of 1970. I can attest that we have always been aware of downturns and upturns anywhere from 90 days to 24 months before anything has appeared in the form of collected data.

Joan Heady: We are attempting to get feedback from the applicants. We have daily workshops on job finding. Basically, we share experiences. We are also attempting to have the applicant report back to the office the information he has gathered from the employer, such as whether he is hiring in that particular occupation or in some other occupation. I used to work in an unemployment insurance office and found that I got much more labor market information from UI claimants that I did from the Employment Service. You ask the UI applicant, "Where did you look for work and what did you find," whereas, in the Employment Service you ask, "What is your occupation, and here is where to go."

Irwin Wingeard: A lot of the work that has gone on at the national level is of a cooperative nature between the Manpower Administration and the Bureau of Labor Statistics, with state agency participation. Of course, one of the programs that we recently launched is the "Job Vacancy Program" which has been introduced into about 50 areas nationwide. It started rather slowly but we are now beginning to publish industry details for manufacturing industries for 28 areas in the country on a monthly basis as well as nationwide data for the manufacturing sector. One of the big gaps in the program is that California is not included. The other program which we are getting ready to run is the Occupational Employment Statistics Program to collect information on staffing patterns in manufacturing industries throughout the nation on a cycle basis. The initial effort is aimed at getting national staffing patterns by detailed industry on an employer-derived basis. One of the things that we hope to introduce into this program is the element of exchange. Then staffing patterns that are developed for certain industries in certain states can be exported to other states.

THURSDAY, 5 NOVEMBER 1970 -- AFTERNOON SESSION

Charles Roumasset

I am Charles Roumasset and I am Regional Head of the Bureau of Labor Statistics. I have with me Mr. Edward Smith who is the Chief of our branch of Economic Research. Mr. Smith is in charge of most of the research that we do at the local level. He is also the principal author of the Quarterly Review of Economic Developments.

I have one publication that I would like to highly recommend. This is a booklet which grew out of one of the Manpower Administration seminars. This particular one is "Automation, Skill and Manpower Predictions" written by Dr. Edward Crossman. Although it was written over five years ago I think it is still a provocative document.

What I would like to do is to go through the information system of the Bureau of Labor Statistics. We like to think it is a fairly well integrated system, although it has some significant gaps.

Strictly speaking, there is no such thing as a Bureau of Labor Statistics Information System . It is a system which, for the most part, is jointly sponsored by the Manpower Administration and the Bureau of Labor Statistics. BLS provides the expertise and the knowledge and the ideas and the Manpower Administration provides the money. This is a gross simplification, however. The Manpower Administration puts in over 50 percent of the funds required to operate the Bureau, but actually we are very proud of the fact that most of these activities -- research, ideas, evaluation of the end product -- are done by the Manpower Administration and BLS together. We cooperate on such documents as the Manpower Report of the President and other Department publications. I don't know where Dr. Aller's students got the idea that the analysis in the Manpower Report was of an inferior quality, except that I have learned that sometimes students reflect the views of their instructors. Anyway I went home last night and looked at the latest Manpower Report of the President and at the report of the Council of Economic Advisors. If I had to pick the one most useful to me, it would certainly be the Manpower Report.

I would like to call your attention to a recently issued document entitled Major Programs of the Bureau of Labor Statistics. It gives in graphic form most of the information which is available from the Bureau of Labor Statistics and from the BLS-Manpower Administration Cooperative Programs. Actually there is a third party in this cooperative enterprise, the Census Bureau. The basic reports in the field of Employment and Manpower Statistics are monthly reports on the employment situation. These monthly reports arise from the household survey which produces the overall estimates of employment and unemployment. To this are melded the figures from the establishment survey. My concern that we not unduly harrass employers for information arises from these employer reports. If one agency can get employer reports, let that agency get them for everyone. In addition to this monthly survey, we have the so-called JOLTS (Job Opportunities - Labor Turnover Survey) program for job vacancies and labor turnover.

We have, in addition, a program called "Urban Employment Statistics" which is being phased out. This is an in-depth survey. The survey that I was talking about earlier in the Watts area was one in which the Census Bureau did an expanded sort of current population survey. The same techniques were utilized, but they got a lot more in-depth information not only on the employment status of the individual, focusing particularly on hard-core unemployment, but also tried to get at the reasons why people were or were not working. They tried to find out whether transportation problems existed and whether barriers to employment were attitudinal. These were series of studies which extended over a year and a half, and they are now being phased out.

We also have an Occupational Employment Statistics Program. It is incredible that the only regular systematic collection of occupational information we have is that provided by the decennial census. Another aspect of our program was started shortly after the outbreak of World War II. It gained added impetus with the return of the veterans and has as its formal expression the Occupational Outlook Handbook. It covers some 700-800 occupations. It describes these occupations, and gives some information on the outlook in these occupations. You may have available in your libraries the Occupational Outlook Quarterly which is issued between the biennial editions of the Handbook. The summer quarterly has a graphic description of all the information in the Handbook in gross terms. For example, it may show that in 1968 there were 500,000 accountants and that there will be 33,000 openings annually through 1980. For many purposes this is all one needs. This is in no way inconsistent with Barbara Kirk's statement that you need one job for one applicant. But if you go back further, it is important to let the young person know whether the openings in the nation are going to be in the magnitude of 30,000 or 300,000.

Coming back to the same subject is a question that Mrs. Corson asked yesterday when she described the plight of a 49 year old high school dropout who was entering the University of California as an engineer and who would emerge at age 54. "What do you tell him?" Actually, this is a lot easier question to answer than, "What do you do with the engineering students who are emerging now?" or "What do you do with the engineers who are now looking for jobs." A few years ago, a precursor of the Occupational Outlook Handbook which was called "Workers of the Nation" had a long chapter on engineering. The general conclusion was that, particularly as far as electrical engineering was concerned, the profession had been over-glamorized and there was serious danger of overcrowding. Also, the first edition of the Occupational Outlook Handbook issued shortly after the War pointed to the fact that most of the demand for engineers was a demand generated by wartime activities and there would inevitably be a slow-down.

The Occupational Outlook Handbook is prepared for the use of counselors and high school students. To some extent it is written in simple language for the benefit of the high school counselor. We are currently embarked on a project which will take at least some of the occupations in the Occupational Outlook Handbook and write them up in terms that are meaningful to the disadvantaged. On a more sophisticated level we have the U.S. Economy in 1980 which comes out of our Economic Growth Division that is following up on patterns of economic growth. This is the background of a very intensive publication called Tomorrow's Manpower Needs which is in four volumes. This uses a fairly unsophisticated technique for trying to project trends. The meat of the technique

is something called the Occupational Industry Matrix which lists 150 different industries and about 150 different occupations and gives the occupational composition of these industries. The intent of this volume is not so much to make projections for the nation as a whole as to give the states a tool which they can use for the state as a whole and for local areas to make their projections. The virtue of this technique is that it is much less expensive than going out and making your own projections. Also, it can provide a good first approximation which you can look at and then go out and discuss. One of our problems is the unknown element. I remember John Vanderburgh talking a couple of years ago about how far off a projection for Sacramento would have been prior to the entry of Aerojet into the market. This is the sort of thing which cancels out at the national level but is very difficult to handle at the local level. But by using this technique, we can make some sort of projections and then look at them and see whether they are reasonable or not. As I keep pointing out there is no substitute for the informed local analyst.

I think we need to do a better job of putting our household and establishment data together. We make a big thing of concentrating our analysis on the information which comes from the establishment survey, not because we feel it is more solid information, which it is, but because we feel that all we are responsible for is the establishment survey. We have information which is collected for us by the census from the household. We have this other system which is collected by the BLS on the establishment. The essential difference is that the establishment survey has to do with jobs and the census survey has to do with people. In other words, if you are going out and collecting information from an establishment, the employer can tell you the number of jobs he has, but if a man works for two establishments he gets counted twice.

We need, of course, more comprehensive job vacancy data. We have only the bare start of information on job vacancies. We are now presenting information for manufacturing only and at the national level only. We hope in two years to get going on this program and provide a little better information. Some of the most important pieces of this system are absent in California, and it has not seen fit to put into its system the provision of job vacancy information. We hope we can convince this state that job vacancy reporting provides valuable information and should be part of its system.

All through this program we have talked about the importance of state and local data. It is a little saddening to reflect that when our appropriation went to the Congress this year, not only was the whole proposal which amounted to about 1 million dollars thrown out, but there also seemed to be little appreciation on the part of the Congress of the value of these data. Our UES has been curtailed. We had an opportunity here to provide some very meaningful data. We had something else that I wish we had an opportunity to follow up. This was a pilot survey which would have given us information as to the motivation of ghetto youth. The youths were divided into three groups; those who had gotten jobs under the Job Program, those who stayed on the job, and those who quit, and a third group who never showed any interest in employment. The idea was to talk to these three groups and find out how they felt about jobs; what their attitudes were if they stayed on the job; why they stayed on the job; if they quit, why they quit; if they never looked for a job, what would it

take to get them to look for work. This particular survey was one which had all sorts of technical problems associated with it. I don't know if we got any data out of it that we could publish, but we certainly adapted to the fact that it was feasible to make such surveys.

Walter Postle: There is this matter of splitting up of the money under Section 106. The Bureau of Labor Statistics got over a quarter of a million dollars to develop a job information program for ghetto residents. I get the impression that the people who are going to develop this program are all middle-class whites, and they will only go into the ghetto in locked cars. I don't see that an operation of this type can really find out anything useful.

Charles Roumasset: Well I can't answer your question because I don't know what they are doing in Washington. I'd agree with you that if this sort of enterprise is going to be confined to middle class whites who have never seen a ghetto, it isn't going to work. I am not so sure that this is the case.

Ed Heler: I sometimes find it very difficult to understand how this money is distributed. We have got the job search information for ghetto residents program. We have people who are supposed to be undertaking a program of developing information that the "ghetto" residents can use. I think that one of the biggest problems that we have is in defining what information is particularly needed in this particular area. We have some ideas as to what would be useful in terms of job search. I think it is going to be a hit-or-miss experimental program where we will try to develop some things through the employment service program. We will send them down to the Urban League and to a number of organizations which are providing information to ghetto residents where we, in the Employment Service, have been very ineffective. We called on ghetto residents and asked what they wanted to know. And they wanted to know, "Where is the job?" "What is the pay?" "Why can't I be referred?" I think a very real item comes out when we talk about the kind of information that we need for the Blacks, the Browns, the Indians. We have found it doesn't do any good to write these things up in Spanish, because the person we are trying to aim at can't read anyway. And nine times out of ten we are writing it in a dialect that he doesn't even know. We are finding that we need simplistic information. We don't need any real complex Job Guide kind of thing, at least not at this point in time.

We have written what we call "Mini-Guides" and our biggest audience is the junior colleges. They are four page, cartoon-type, booklets which have information on typical tasks performed, wages, working conditions, career ladders and some material about how one can go about finding a job. The local offices wouldn't touch them. They are written and designed so that they are at the sixth grade educational level.

Irwin Wingeard: I would like to add something to this particular discussion on Job Information for Ghetto Residents. Really at this stage it is only experimental. The program is now concentrated in the ten COMO cities. This is another experimental program which is being tested out in those

cities and it is intended that this program and the material it will produce be evaluated in order to determine what is useful and what is not useful. There are several aspects to this program. One phase of it is a cooperative endeavor with BLS in which BLS will prepare national job descriptions and national economic information about particular jobs. They are going to do this for about 80 jobs. And then the idea is to send this down to local areas and ask them to flesh it out with local information about those particular jobs so that there will be some information about these jobs in the local area. The other phase is this experimental, innovational development of information which will be useful for ghetto residents. And the information that is developed will be exchanged. There is another idea, and that is to take Job Bank information and see whether this information can be rearranged in some fashion that will make it more readily useable and understandable to ghetto type individuals. This is being tested and experimented on. They are using several different designs for formating Job Bank information. All of this is experimental at this time, and, hopefully, we will come up with something that may be exported into other areas.

William McCreary: We need to develop a system which will be well-organized, well staffed, and well supported for collecting, organizing, and imparting labor market information to all public and private agencies that need it and that could make good use of it. The schools disclaim any obligation or any desire to take some of their manpower away from their counseling duties and other duties to organize this kind of collection system. They feel this should be done by other agencies of government.

Charles Roumasset: We found that the most effective way of reaching the counselor is by a little publication called "ORBIT". It comes out twice a month and is produced by the Department of Labor's Office of Information in the San Francisco region. The thing reaches a lot of counselors. They request it and they read it.

Gordon Cavana: When counselors have a student-counselor ratio of anywhere from 2oo to 600 to one, they don't have enough time to talk to kids about occupations, let alone about anything else. Many of the counselors talk about getting some funds for an occupational counseling class. We can't expect counselors to know everything about occupational counseling. It is just impossible.

Charles Roumasset: The answer to this is to have the name of a person in an occupation who knows that occupation. If the kid is interested in sheet metal working, he can go to this person and get the information he needs.

Nansi Corson: Back to your statement that most kids don't use the Occupational Outlook Handbook. Is there any evidence to indicate that they don't use it because it is not good or they don't use it because they haven't reached that point of readiness?

Charles Roumasset: I don't have any evidence. All I have is just that we were told this.

Nansi Corson: One of the things that came out of Margaret Thal-Larsen's study that was very interesting to me was that so much of the counseling that was done in the high schools boiled down simply to personal and social counseling because there was no interest in vocations. They certainly haven't gotten it out of their homes in recent years.

Barbara Kirk: Generally speaking, from my point of view, vocational counseling is the most difficult kind of counseling. It has fallen into disuse among many counselors because it is very difficult, and it requires much more knowledge and much more skill than most of the so-called personal, social, emotional-type counseling which often consists merely in sitting and listening and not really doing anything. Vocational counseling needs to be active and there needs to be a lot of participation. And relatively few people have adequate training to give it.

If we are talking about needs for occupational information, a major need is for that segment of our population which, depending on our point of view at the time, might be considered either downtrodden or villanous -- the parents. They have a great deal of influence upon the counseling process of their children. They have a lot of effect as far as schools are concerned and as far as the individual students are concerned. It seems to me that real nitty-gritty occupational information about where the openings are going to be, and how relatively few jobs there are for some college graduates, and how much better jobs there are for those who really know how to do something, can be extremely valuable as a kind of public information. There should be a general dissemination of this kind of information for parents who put pressure on the kids to go to college when one of the marginal groups in our current labor market are graduates of universities in the social sciences. This kind of information about where job opportunities really exist and are going to exist can be very helpful to everyone.

Walter Postle: One thing I would submit the HRD has done well is that in their Unemployment Insurance Office they have taken a good look at their market for various types of information. The same kind of question comes up about particular high schools. They could take a good look at the market for their high school graduates. What information is absolutely necessary to run that counseling office or placement office in that particular high school? The information needed in Eureka might be quite different from the information needed in a labor demand area like the big metropolitan areas. I think it is possible to go into a high school and take a good hard look at just what sorts of kids are there and what they need. The problem with most of the literature in this field is that it isn't specific enough. What is really needed in the counseling operation in Los Angeles schools as compared with the Central Valley? There must be a way of reducing our information demands.

Paul Bullock: I just want to add a few comments on the question of getting job information to ghetto areas, and particularly to areas that have not been effectively served so far. I think the first thing that we should recognize is that in certain areas the image of the public employment service and of school counselors is strongly negative as a result of past contact

with these institutions. And second, possibly as a result of this, and as a result of other experiences and other factors, we are confronted with a kind of massive cynicism about a great many of the programs and a great deal of the information which has been offered in these areas. It seems to me that not only is the nature of the information and even the style in which the information is presented important, but also the question of who presents the information -- the image of this person or this institution. In this regard, I am wondering if public agencies such as the public employment service and the schools might not innovate more in the area of creating jobs within their own structures for the residents of low income ghetto areas. These, in turn would become the major purveyors of job information and of other kinds of information from the agency to that community. This is not necessarily an automatic solution to the problem. You obviously face the danger that at the moment the community resident at the lowest income category is hired and placed on a job, he may by that fact lose the rapport he has had with the so-called hard core within his community. We are not sure that using community residents will meet the problem in toto. But, I think we can be pretty sure that it will not be helpful if the circulation and distribution of information is limited to people who come in with a traditional and standard image which immediately and almost automatically arouses the kind of cynicism that already exists. It would seem that using the New Careers Program to develop job opportunities for people who have the kind of disabilities that usually keep them out of these agencies could by that very fact begin to change the image of an agency. Secondly, it would be advisable to experiment with working with and through organizations in the community which are more indigeneous to local neighborhoods than some of the more traditional institutions. For example, the Urban League can, perhaps, do an effective job in certain areas, but I would suggest that the Urban League would have very little impact, very little relationship, to the Watts community. It would, in fact, share some of the negative image that many of the public organizations and schools have also suffered. And so I would suggest that in addition to trying to bring the so-called disadvantaged into these institutions, they also try to work with organizations such as the Black Panthers or the Sons of Watts even though this will create some political problems.

Ron Smith: Paul, you have mentioned the need for different and improved methods for disseminating job information. You have also touched on the motivational aspect. Would you then say that the informational needs of ghetto residents are essentially similar to the needs of other individuals?

Paul Bullock: I think probably that the information needs are the same. But is is important to take into account the fact that you will confront a kind of disbelief and cynicism when this information is first presented. You have to be persuasive not only about the fact that there is a job opening, but you have to consider that you are talking to a guy who may have some sort of a record. And you have got to consider the fact that just mentioning that here is a job may trigger within him an immediate reaction such as, "Well okay, here is a job, but they aren't going to hire me." So in that sense you've got not only to convey information

about the job opening such as the requirements of the job, but you have to consider this person very specifically in relation to that job. You have got to know personally that the agency or the firm that has that job opening will seriously consider him even with his record or with his school background. You have not only got to be sure of that, you have got to be able to convey to him in the most convincing way possible that no matter what his past experiences have been, or his preconceptions are, in relation to that job, that he does have a legitimate chance of not only getting it and staying on it but, perhaps, of getting some sort of a promotion. This is what so many of the existing programs do not do, or they try to do it but it is terribly hard to do it with people you can't identify with.

Charles Roumasset: I think this comes down to what Curt Aller was saying yesterday, what he referred to as the creative use of information. He was talking about structuring the job market to fit the needs of its applicants. It is reminiscent of what Secretary Wirtz used to ask, "How did we get into this box of training people to fit jobs, rather than structuring jobs to fit people?" We keep raising the distinction between data and information. There is also a distinction between the provision of information and the construction and implementation of policy. Now, how far should our institutions be going to change the labor market?

Larry Harrington: I wanted to comment on what Mr. Bullock was saying about using ghetto residents to serve as counselors and job information sources to ghetto residents. I think this is the rationale that went into the development of the HRD Act. I think out of that Act came the classification of Community Advisors and the use of these people in disadvantaged areas to communicate with the citizens. It has proven to be somewhat suecessful. But I am wondering if we were to take this approach as is now being done in California how this affects our needs in delivering the information. Is it really necessary to take information about jobs and refine it to the point where it can be interpreted by someone who has a 3rd or 4th grade education, when in fact the information will be delivered to someone who is a high school graduate or college graduate, and who has been selected to be a community advisor because he has the ability to understand the information the establishment has given him and recommunicate it to the ghetto resident?

Walter Postle: I see two problems here with this operation of the BLS and the Manpower Administration. One is the format in which you are going to deliver this information. The Manpower Administration and BLS are wedded to the mimeograph machine. There is little attempt to come across using modern media methods which are probably the best ways of transmitting the stuff to the ghetto. The other thing is that I think the people in the ghetto have got to be reached in a different way because they look at the labor market in a totally different way than that of the white, middle class people who are going to set this thing up. Is there a better way of doing it then printing the information? Is there a better way of pitching it? You are talking about using community workers as ambassadors into the ghetto. Can you picture handing a Black Panther a California Occupational Guide and telling him "Go deliver this stuff to the cats in the local pool hall"?

Larry Harrington: I indicated that the information was given to a community action person. I think they could make good use of Occupational Guides. I think these publications could be interpreted at a certain level and made more basic as it goes down to people who have direct contact with the residents.

Paul Bullock: It is tremendously important to be completely honest both with yourself and with your client. You must realize that if, even by inadvertence, you direct him into a job which is either an immediate dead end, or within which there are barriers, either formal or informal, you have then created an impossible situation. It is very important to know all the circumstances surrounding a job. You must know more than that there is a job opening. You must know if it is effectively and realistically open to him and be able to communicate this. You must not accept employer policy simply as given and then adjust each worker to these constants. You have to work continuously to get employers to review all the stipulations and all the standards that are now associated with the job and to eliminate those criteria which are not directly related to the quality of the work.

Charles Roumasset: Well, I think, even within my own limited knowledge, you will find that government is doing this whether it be in the field of education or of work. Jobs are being made available to ghetto residents. And labor has carried this one step further in the creation of the Philadelphia Plan.

Irwin Wingeard: I think there has been a great deal of effort made on the part of the federal agencies in order to get people into the system. They have developed new ways of evaluating these people for jobs. The New Careers Program has been specifically designed for this purpose. And there has been a great deal of advancement made in getting indigeneous people on to the government payroll. I would like to say further on this matter of the delivery of information that we are engaged in experimental programs. It was intended that all kinds of media be used to disseminate information.

Joseph Epstein: It strikes me that we are heading into a situation where, if we don't at least know ourselves what the problems are going to be, we will certainly confuse our applicant groups. What is going to happen when the sons and daughters of middle class America can't get jobs? The easiest way to get budget cuts is not to fairly and squarely face the situation. And this brings me back to the whole question of labor market information systems that will trigger the danger points. Often, the first manifestations of these situations are seen in the local offices, but the solutions are not there. The solutions are at other levels of government and society.

Charles Roumasset: There are people in the ghetto who don't want to work, who don't feel that the job interests them, that there are other ways of living that aren't associated with the rigid work week.

Larry Harrington: I think the establishment has been studying the situation of the disadvantaged and as a result of this people have been crying that they have been studied to death. So this has been one of the bones chewed on by organizations that developed in the disadvantaged areas to fight against the establishment. One of the things that these organizations have been preaching to the residents is that "They need us." The society needs them, because as long as you have a needy group, this provides jobs for the social scientists, job agents, employment security officers, and so on. You develop your programs to the point where you neglect the sons and daughters of the middle class and then you just have a larger base of disadvantaged. It is really the responsibility of government in this case to begin to look at what job prospects really are and then to try to do something about it.

FRIDAY, 6 NOVEMBER 1970 -- CLOSING SESSION

Walter Postle

This morning the topic is the "state of the art" in the labor market information field. I can only say that the state of the art is nothing to get excited about.

It appears to me that we have a great deal of aggregate economic and labor market data but, despite this enormous pile of paper, we have very little useful information. And where we do have information, the processes of exchanging this information among the labor market intermediaries is so disorganized that no one is happy with what they have or what they get. What is worse is that many people in our society are short-changed by the failures in the labor market information system -- since without information on where the jobs are, how to get and hold them, they are effectively excluded from the economy.

The labor market information programs mounted by State employment security provides a good example of what I am talking about. For years these agencies have turned out quantities of information on the characteristics of the economy; however, the data flows have been aimed primarily at "outside" organizations -- the major banks, insurance companies, government agencies. Consequently, little attention has been paid to the development of "real" labor market information for the prime movers in the labor market -- the staff of the Employment Services' own local offices, the manpower agencies, and the school counselors and placement officers. These people have been grossly neglected.

In 30 years of operation the Employment Service has never figured out what it takes to supply these offices with good data, nor the school counselors with the information they need to operate on. Nor have we examined what it really takes to run an effective school placement office. The only rational labor market information program we have at this time is the one outlined by Art Shiigi. In view of the enormous sums we pay out weekly in employment insurance it makes considerable economic sense to do something about making sure that the claimants get assistance on how to find a job. Reducing the length of unemployment by only a few days for the average claimant, adds up to enormous savings for the unemployment insurance system.

In the past 20 years or so, employment security agencies have concentrated on the techniques for actually finding a job in a particular industry in a specific local area. It is one thing to develop statistics about how many people are in an occupation. It is a totally different thing to examine <u>how</u> the job market operates in the occupation. What are the actual union hiring practices? How do you get round the union if you are not a member? Where are the jobs? Are they near the bus lines? Who is being hired and by whom? Answers to this type of question are becoming increasingly important in the labor market information field, and it is this type that analysts are being increasingly asked to provide answers to.

In the last 10 years we have seen the amount of money spent on manpower programs increase to more than two billion dollars a year. However, in my view, there is little real information as to where the training slots are, how many are available, and how many should be available in any particular community. There is also a lack of information on many matters that must be known if workers are to take full advantage of this training -- such as, where are the child care centers; what legal, medical and social services, what transportation facilities, are available? All this information must be brought together if we are to have an effective labor market information system.

I am convinced that we have impressive informational resources. In California we have information on virtually every single employer. We have information on more than six million workers in our unemployment insurance records. Almost all of this information is available if we want to dig it out.

However, there are major institutional blocks. For example, for many years, we have had no convincing rationale for a labor market information program. It is a general term that most administrators do not understand and regard as a frill. Mr. Shiigi's program derived much of its appeal, in fact it was "sold", on the basis of the argument that, by improving the labor market information system, the period of unemployment could be significantly reduced for large numbers of claimants. To try and save money, the administrators and employers were willing to make an investment in the provision of information which would help cut the drain on unemployment insurance funds.

Micro-studies of the labor market have been carried out as far as I know only in California. Jim Neto of the Coastal Area Office of the Department of Human Resources Development was the first person to set about the task of finding out how a specific labor market worked and, more importantly, how this information could be fed into the job market system. Despite Mr. Neto's breakthrough, there has yet to be developed a powerful rationale for producing this type of information. In my view, it is this detailed information that tells it as it is, rather than aggregate industry/occupation data, which is essential for the operation of any placement operation in the schools or in the manpower agencies.

We certainly do not have adequate information properly organized on the economic framework. This sort of information the placement officer must have to do an effective job. In the palmier days of the 1940's, 50's and 60's, placement officers could acquire an intimate knowledge of their community almost by a process of osmosis. But nowadays, given the tremendous expansion of manpower programs, and the fact that many staff members move through the agencies like gypsies, they can no longer be given two or three years or more to learn their job, or how the economies of the communities actually operate. As I see it, the major task before us in the labor market information field is to provide the manpower service staff with standardized information on the occupational, industry, and social service mix of communities. This sort of information in capsule form would assist them to get a firm grip on the local job market.

I would like to add one other point. In addition to having an effective labor market information system, I believe we should also acquire an effective manpower management information system. I believe they go hand in hand. In

sum, I think we are in a bad way. We must find a rationalization for our information programs which can be justified as a sound economic investment. If we continue to turn out generalized information -- the sort of stuff that it is nice to know but is not essential -- administrators will never provide the resources necessary for the job.

George Reavell: I feel sure that there has been a pilot program, possibly it was in Ohio, which worked out some of these problems that involve a communication of needs between the employment service and the schools, and of having the employment service assist the schools.

Walter Postle: I don't know. Much of the time the schools and the employment service operate at daggers' point.

Ed Heler: There have been some efforts to achieve a sort of system. But there are real communication difficulties. We do lack a common terminology. The schools, the employment service, the census -- we all have different occupational codes that are not necessarily compatible. We tried to work this out in Arizona; we had our "Economic Round Table". At the start we were only trying to get everyone to use the same population figures at first, but then we extended our activities to broader matters, and we ran into difficulties. Just trying to get four State R and A Chiefs to work together is hard enough. To use Crossman's model, we do need that "supervisor".

Dennis O'Connor: Possibly our problem is not a lack of information, but too much of it. Maybe the employment service interviewer is burdened with too much data. The problem is to find out what is <u>really</u> needed.

Walter Postle: That surely is what we are trying to do now.

Gordon Cavana: We still have this problem of data versus information. There was the 1966 East Bay Survey of all jobs that went to the schools in volumes. I thought this was "data".

Joseph Epstein: All agencies have different needs and these agencies have different information requirements at their different levels. Our ultimate aim must be to put a man in the job where he fits best and where society can pay him the most. It is our job to find out what information is needed to do this and then to structure and stratify this information.

Take our four projects that are going on now. The project leaders have been given the responsibility "to see what the elephant looks like"--to see how all of these pieces fit together into a whole. Project staff must first see what the micro-areas look like. Then they must figure out what are the logistics, the back-up. Our project people are being asked to stratify a labor market information system at different levels. What feedbacks are required at various points so that the different parts of the system can work together?

There was no comprehensive view of the economy until Keynes, and today we need a comprehensive view of a labor market information system.

Sherrill Neville: There are many gaps in our information system which must be filled before it can be described as comprehensive. We need a standard occupational coding system as much or more as we ever needed the SIC. Perhaps our worst gap is our lack of an objective and documented base for many important segments of our labor force. We have no such base for the agricultural self-employed, or for the new entrant unemployed. We need some way of tapping the CPS (Current Population Survey) in order to obtain an objective fix on these and other groups in the labor force.

Charles Roumasset: I admit to these gaps. Even the BLS is confusing the public with labor force estimates based on the Current Population Survey, and by employment estimates derived from establishment-based reporting. Another problem that we have is the general public confidence that all our problems can be solved with the decennial census. True, we do need this picture of the universe, of population by place, sex and race. We must have a fix on the demographic scene. But we must also make better use of the system we have for establishing the characteristics of local populationsas we go along. It is hard to say where our emphasis should be.

Joseph Epstein: Each level must get its due. The thing is to design an articulated system and to get the "noise" out. This means that we must establish what the needs for information really are. Then, we must take a look at what we now have and decide on what else must be done. Priorities must be established, information flows and feedbacks designed.

Ed Heler: We revised the organizational set-up of our R&S section. We retained the old federal reporting programs for these sections, but took on Occupational Analysis including test development. This merging of Occupational Analysis and R&S has led to our more effectively serving counselors and others.

We have moved away from the "Manpower-Challenge-of-the-Sixties" type and the "Occupational-Guide" type of information to some very simple things aimed specifically at placement needs. Also, we have had to shift from serving the community in broad terms of overall economic planning to serving its internal needs.

These moves have not greatly changed the sources of our information,although its packaging has changed. However, we would still like to serve as the "Economic Analyst of the State". There are so many problems where good data are essential to good policy. There is, for example, the problem of getting a fix on seasonal and cyclical developments.

George Reavell: I would like to stress the importance of the vocational councils that are advisory to the schools. They frequently represent an excellent source of information about occupational developments.

James Neto: Yes, but so often we do not really have even the concepts which we need to deal with the subjects we are considering. For one thing we need better measures of labor supply. Who will have been prepared and who will be competing for the same future jobs? Where are the trained inmigrants? Will workers compete for jobs who are from other disciplines than those which we thought would furnish the supply?

Ed Heler: We really need longitudinal demographic studies to answer questions like these but there have been very few such studies to shed light on the supply side.

Larry Harrington: We have to think of the interaction which exists between manpower and the users of these data, education and the employment agencies. Any system which we design must take these interactions and these interrelationships into account.

Walter Postle: We were talking about changes in institutions that were preparing labor market information. This has happened quite by accident in the California agencies. In California there is a traditional Research and Statistics Unit which is primarily concerned with the traditional labor market information program, the broad economic development of labor market operations. Then we have the Ron Smith enterprise. Would you describe how it got underway and what direction you are going to take?

Ron Smith: The JIS program came into being primarily because of a need for information on which to base eligibility determinations. California law is very complex and we are required to have information on community practices, prevailing wages by occupation, job centers, usual conditions of employment, hours of work, and this type of thing. The only way the program could be sold was to meet this need. And it was and is a pressing need. The approach that we took was to place a unit of staff within a local office and give this person the responsibility for recognizing and meeting the informational needs of the local office UI interviewers. We rely as much as possible on using objective methods to determine these needs. We soon found that simply asking people, "What information do you need?" was ineffective. They generally do not know what information they need and if they do know, they have difficulty in telling us.

We prepare job summaries on the significant occupations identified in the individual local offices. We also use a union summary which provides the needed information for union-controlled occupations. Possibly because of the withdrawal of placement services by the employment service section of the agency, and probably because we found that the information developed for the UI interviewer was also valuable from the employment assistance aspect, there has been a redirection of our project about a year and a half ago. When we took this on originally, we were motivated about 90 to 95 percent to obtain eligibility information. I would say now that the emphasis has been nearly reversed. Our main objective now is to provide employment assistance and our concern with eligibility information has significantly diminished.

A month and a half ago a new section was formed called, aptly enough, the Employment Assistance Section. This covers the job information project as well as the claimant services program. In the local office, in addition to the JIS position, we have interviewers who are prime disseminators of job information, who can take whatever time is needed to interview applicants and offer employment assistance. They deal not only with the informational, but also the motivational, aspects of this assistance.

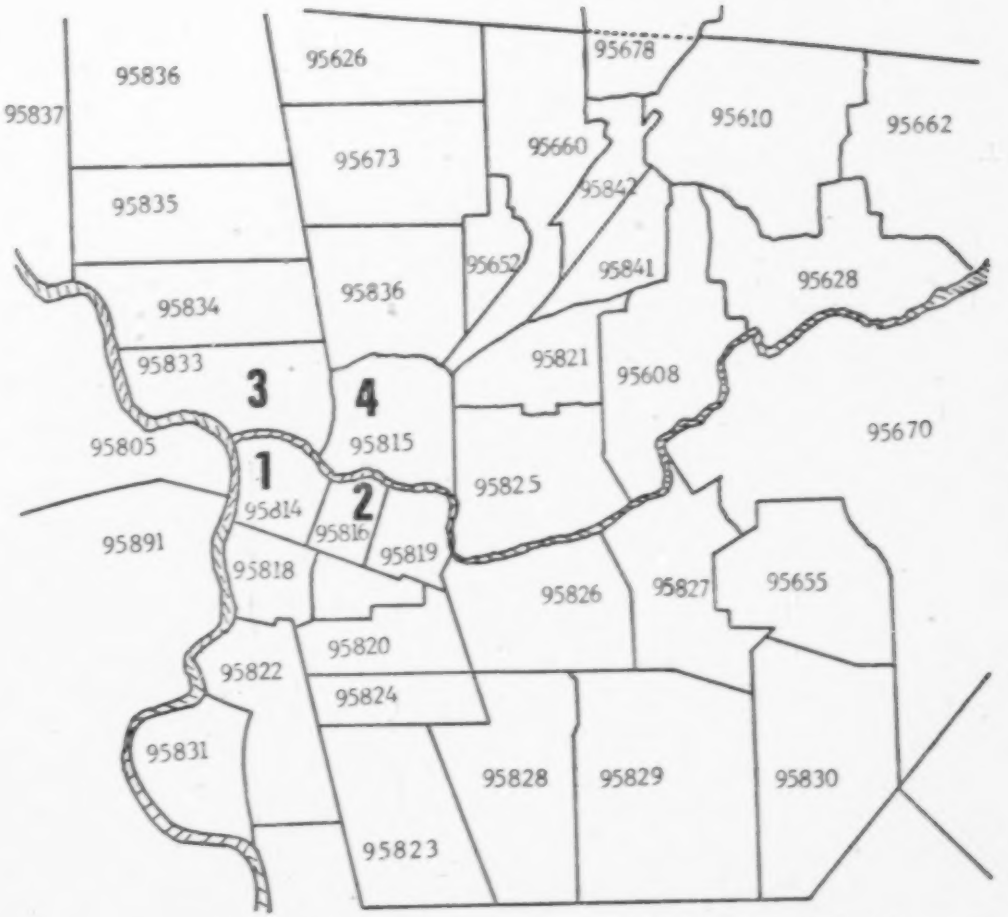
We are frequently unable to determine an individual's occupation with respect to a six digit DOT title and code. It is certainly desirable to go to the nine digit system, but we cannot do this at this time. When we thought of handouts, we had to think of roughly 80 to 100 occupations and an aggregate of 200 or 300 different industries. The number of handouts needed made the project unfeasible. However, here we are talking about as few as 10 to 15 different handouts (see Figures 6, 7 and 8). If you will look at the page on Clerical Occupations, I will try to explain what this is designed to accomplish. First it can be used to make primary eligibility determinations. The column in the upper left-hand corner lists the primary job areas illustrated in the map on the right, and the next columns show, for job area, the number of employers, the number of clerical workers employed and the percentage these workers constitute of the total positions. In the three columns below we then enter 12 or 15, or perhaps as many as 30 individual clerical occupations using the DOT title and followed by the DOT code. The areas where each of these occupations has previously been identified as making up a significant portion in the local office's claims load are specified in the last column. On the reverse side of the form we again list the significant occupational titles and their DOT code and then indicate the industry of attachment, its SIC code, and information helpful to the job search in that industry. For clerical occupations this is generally relatively simple, with any industry shown in the sheet employing a whole string of occupations. But now look at the reverse side of the sheet on Service occupations, and I think you will agree that the business of attaching industries to occupations gets a bit mind-boggling.

There are problems in assembling this type of information. In some offices we have a list of employers arranged by SIC and ZIP code. In offices where the SIC code is important, obviously we will not present the information to the applicant in the form, "Look at SIC 7021". In offices where for one reason or another we don't have an employer listing, we rely on the telephone directory reference. This is a very difficult problem. We only recently obtained material from the telephone company. The last column on this sheet is information about methods of establishing contacts with the employer. We will show a complete listing of all the ways of obtaining leads and establishing contacts that we have identified. This will give our claimants the full spectrum of information. But we will also place reliance on the knowledge of local office interviewers to suggest certain methods as being preferred, based on community practices or centered on the job seeker and his needs. I think that you can see that we have made a substantial shift in our direction. This has been occasioned by our recognition of needs. Yet I don't think we will start approaching our goal of a "one week reduction in the period of unemployment" unless we can get some policy changes. For example, the law says "a person shall use the usual method of seeking work". It is pretty easy to determine the "usual method" if individuals in a certain occupation are usually unemployed for 13 weeks. Then our practice could be to tell them to do the usual thing and remain unemployed for 13 weeks. We have a feasibility study under way in Los Angeles to make a determination of what is the best way not just of seeking work but of becoming employed.

AREA	NO. ER'S	NUMBER EMPLOYED	PERCENT OF TOTAL POSITIONS
1	560	2,100	28
2	475	1,850	25
3	197	850	11
4	147	673	9
5	58	135	2

OCCUPATIONS	CODE	AREA
SECRETARY	201.368	ALL
FILE CLERK I	206.388	ALL
CLERK TYPIST	209.388	ALL
TELEGRAPHIC TYPIST	203.588	1 and 2
BOOKKEEPER I & II	210.388	ALL
CASHIER I & II	211.368	ALL
DIGITAL COMP. OPT.	213.382	1, 2, and 4
KEY PUNCH OPT.	213.582	1, 2, and 4
BILLING MC OPT.	214.488	ALL
PAYROLL CLERK	215.488	ALL

FIGURE 6: CLERICAL OCCUPATIONS



	2	4	6	8	10	12	14	16	18
AUTO MOSTLY FWY (33mph)	3	7	11	14	18	22	25	29	32
AUTO SOME FWY (28mph)	4	8	12	16	20	24	28	32	36
AUTO NO FWY (22mph)	5	10	15	20	25	30	35	40	45
BUS MOSTLY FWY (30 mph)	4	8	12	16	20	24	28	32	36
BUS NO FWY (12mph)	10	20	30	40	50	60	70	80	90

Information contained in this table is average travel rates during peak traffic hours. Auto rates vary with individual driving habits, weather, traffic conditions and other factors. Bus travel rates vary tremendously, depending on these factors as well as area of travel, transferring, etc. For precise information, the appropriate bus schedule should be consulted.

OCCUPATION	DOT CODE	INDUSTRY	SIC	TELEPHONE DIRECTORY REFERENCE	SOURCE OF JOB LEADS AND METHOD OF CONTACTING EMPLOYER
Secretary File Clerk Clerk Typist Digital Comp. Op.	201.368 206.388 209.388 213.382	Government	90-- 91-- 92--	White pages: California, State of Sacramento, City Sacramento, County United States Govt.	County: Apply to personnel office to make app. State: Apply to State Personnel Board- obtain written job announcement- make written request to be placed on mailing list for announcement. Federal: Apply to personnel office- 400 Capitol Mall.

Telegraphic Typist

FIGURE 7: CLERICAL OCCUPATIONS

OCCUPATION	DOT CODE	INDUSTRY	SIC	TELEPHONE DIRECTORY REFERENCE	SOURCES OF JOB LEADS & METHOD OF ESTABLISHING CONTACT WITH EMPLOYER
Waitress (Waiter Bus Boy	311.878 311.878	Retail Trades	58--	Restaurants, Banquet Rooms Taverns, Cocktail Lounges	Referral by unions, friends and relatives.
Cook (H&R)	313.381	Government Services	90--, 91-- 7021, 7041, 7933, 794-, 8061, 8092	Hospitals, Country Clubs Bowling Alleys, White pages under California, State, County and US Government	Government Civil Service Job Announcements
Porter I	381.887	Service Retail Trades Government	70--, 734- 5311, 90-- 91--, 92--	Hotels, Motels, Janitorial Services, Department Stores, White Pages; California-State of United States Government	
Nurse Aid	355.878	Services Government	80--, 90-- 91--, 92--	Hospitals, Medical Services Rest Homes, Convalescent Hospitals White Pages under: California State of: Sacramento County	Public and Private employment agencies, newspaper ads, Unions, friends and relatives <u>Establish Employer Contact:</u> General- It is adviseable to contact most employers by telephone prior to visiting. This saves time and unnecessary travel- it also allows the employer to select the most suitable time for the interview. When applying for Government employment it is usually necessary to apply directly and to respond to written job announcements.

FIGURE 8: SERVICE OCCUPATIONS

Walter Postle: Is any of this research that you do going outside the agency?

Ron Smith: It wasn't intended to, but it has.

Walter Postle: The idea comes to mind that with this approach, you should have a pretty good idea of what the job market is in a particular city. This might be useful in a high school. Will you be doing this for every major SMSA?

Ron Smith: If the feasibility study shows this method to be effective, and if the demand is sufficiently strong, we will defer our established work projects and do it statewide.

Walter Postle: Mr. Cavana, would you consider this kind of stuff data or information?

Gordon Cavana: It seems better than anything we have got going.

Larry Harrington: I will be very cautious and say I don't know. From what I see of it right now it looks as if it might be useful to counselors in schools. Personally, I leaned a little bit towards the "mini-guides". This may be the right time for me to mention a recently initiated new approach to planning for vocational education in California. Initially it took some time for the legislature to recognize that HRD was involved in training people or recommending training programs for people, and that the schools were planning their curricula on information received from HRD. Then something happened. It was discovered that HRD was training people for jobs that no longer existed. It provided the impetus for the legislature to opt for a new approach to developing a manpower training program, or at least exposing students to a type of vocational training that would be relevant to the job market. Along came a bill that required the three agencies concerned with vocational education and technical training (HRD, Department of Education, and the Chancellor's Office of the Junior Colleges) to get together, look at the state, and divide it into planning areas. Twelve such areas were created throughout the state. It was also decided to form planning committees in a few of these areas for demonstration purposes and we have been involved in the organization of these committees. I would be interested to hear from anyone here who has comments on this project.

Joseph Epstein: One thing that you said which hit me between the eyes was that HRD is training for jobs that don't exist. I am curious to know how that could have happened even assuming only a minimum training survey before the training got started.

Ed Heler: This might go back to the policy that we should train no matter what for. There are some training programs which are being run because we happen to have the equipment.

Joseph Epstein: When one says "training for jobs that don't exist", that could either be a damning indictment of the system, or it could be something I am not so sure we should put a stop to. Suppose we are talking about an

industry that is particularly sensitive to the economic cycle. America's great industrial power comes from the fact that it can create machines of all kinds to serve industry. And most industries buying these machines are notoriously cyclical. Now is the kid who comes out of high school just at the moment when a downturn is setting in in the capital goods industry to be told that for the rest of his life he ought to forget about becoming a skilled machinist? I am not sure about how our information systems can be designed to cope with cyclical trends.

Larry Harrington: That level of sophistication isn't built into our program. If you want that kind of sophistication you have to build a mechanism.

Sherrill Neville: I would like to put in a plug for paying more attention to basic data. This is something that we in Utah are trying to do in our computerized Small Area Establishment Address System. It boils down to getting our unemployment insurance people to make notification every time there is an address change which is then stored in the computer. Here is an example of how a relatively small improvement in the quality of basic data may yield substantial dividends to the local office delivery system. In addition we have a fix on seasonal hiring patterns -- Utah is a very seasonal state. Here in California, I imagine, it would be very desirable to have such a fix on seasonal hiring patterns in the service occupations.

Jim Neto: We talk about the needs of workers by occupational groups at some time out in the future. Too often we are only concerned with the demand side and that is where all the work has been done in the past. If we are just talking about demand projections, these don't really get you any closer to effective planning.

E.R.F.W. Crossman

I feel that I am not in a position to give a good summary of all that has gone on and propose to call shortly on Margaret Thal-Larsen who is better qualified for this task than I am, and to give Joseph Epstein the last word from the Washington standpoint.

A lot of valuable data has been presented in these last three days. I am sure that each of you will turn it into information in the way that best fits your needs and this is as it should be. It is apparent to me that there already is a living, breathing labor market information system, a system in the sense that efforts are coordinated. Since we are clearly not faced with a set of disconnected activities, it would appear to be possible for many of the subsystems to be separated out and treated independently. But I would just like to look at the total system and try to sketch out how the subsystems might fit into it.

Joseph Epstein, in some sense, is riding the elephant he described and he would, in some sense, like to steer it. At the other end we get down to the grassroot level which consists of the job seekers. Most of us are in between. I think we can start to conceptualize the system by looking at the various levels in the space and time dimensions. At the local level, which corresponds

roughly to job matching, we have heard about a number of problems concerned with such things as objectives and performance criteria, information needs, data sources, dissemination and delivery, evaluation and review mechanisms. All are typical of systems problems that occur at the micro level. At a slightly higher level, we have counseling and guidance which demands a little more time. I think we might usefully consider both as part of the short term local subsystem. Then we might have a medium level -- regional subsystems -- operating on a larger space and time scale. Finally we have the national level which operates over a time segment of maybe two years and over an area enclosed by the national boundaries. That gives us an overview of the total national manpower system within which all the subsystem problems interact.

Now it is characteristic of any total system that there will be a number of partly independent and partly interacting subsystems. Joe Epstein's problem, as I see it, is to find an overall system model in which all these subsystems make sense. The reasons for this I suggest, is that he would like to come up with a rational approach for the allocation of resources across the subsystems, a rational means of evaluating performance of the subsystems within the total system. He would also like to see improvements in performance by upgrading the techniques of the various local subsystems. The particular interaction which seems to occur between various subsystems is data sharing. There seems to be a need to get data that can be shared among the subsystems, thereby optimizing the use of the total data base and minimizing the duplication of data collection.

Here I would like to refer back to the distinction I drew between information and data (see Figure 9). You have a situation which you would like to modify and in order to take an action you need a model. The general way of getting a model constructed is to collect data by some kind of sensor and then process it in some way to convert it into information. Information is that which can be used directly to determine action.

What we have in our system is a tremendous amount of data with models of limited validity. The problem is to define what models are required and what kinds of processors can best generate them. The manpower system is not itself independent. It interacts with the economic system. Yet on the short range and local level the labor market system can be taken independently of the economy. The disturbances injected into the labor market from the total economy tend to be somewhat longer range and slower, so they leave the local level somewhat independent in its action

As we are running short of time, I don't propose to pursue this line of thought further. Instead I would like to conclude by saying that, so far as the research contract we are presently working on is concerned, this meeting has been extremely productive.

Margaret Thal-Larsen

Professor Crossman has intimated that I will tell you how the proceedings of this conference have helped us. Not to labor this point at too great length, I believe it has helped us in two ways: first, by broadening the field, and

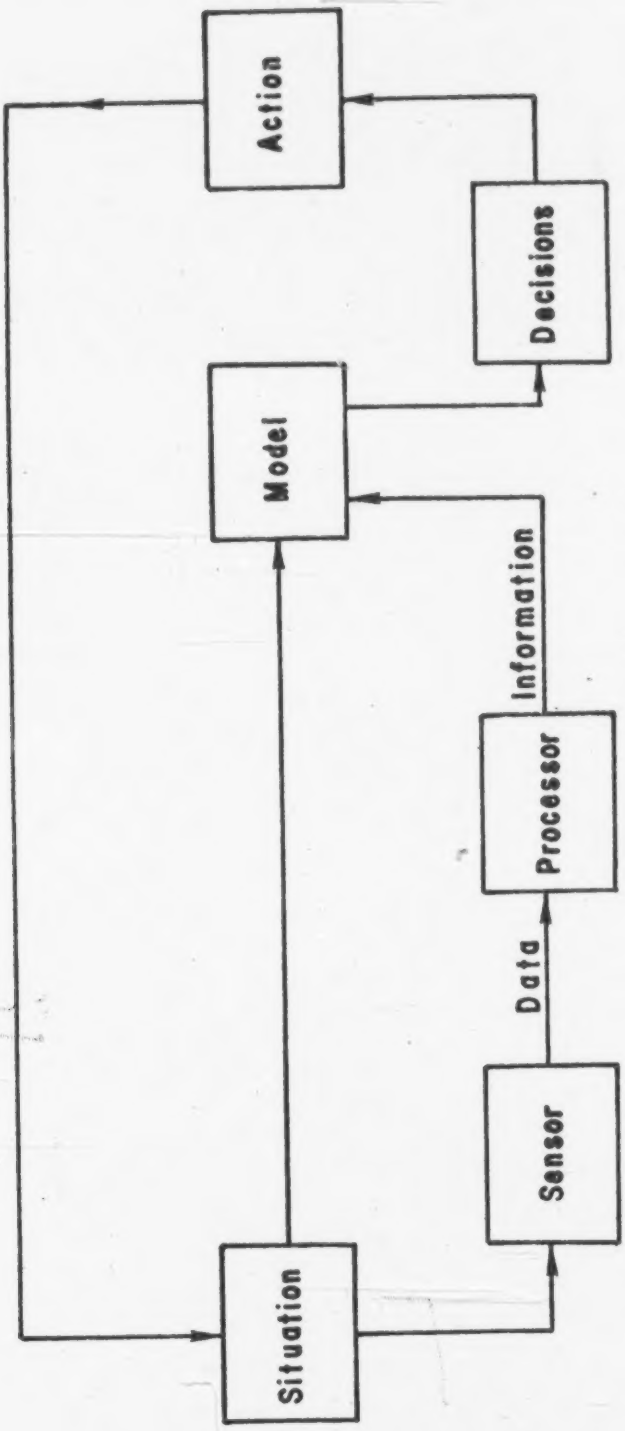

Action
Decisions
Model
Information
Processor
Data
Sensor
Situation

FIGURE 9

second, by adding to the fund of both data and information with which we will be working. In a sense, the deliberations of this group have made this large and complex subject of a manpower information system even larger and even more complex. This would be rather disturbing if it were the only outcome. It is not. The discussions have taken certain turns which have added to the structure that we are looking for. They have helped us to delineate and, in some cases, to limit the system. At the same time they have sensitized us to certain specific aspects which will have to be explored and investigated.

This leads me to what I really want to say which is, Thank you. I am impressed by the level of interest that has been displayed by the group that we have together here. The intenseness of this interest is the reason why you have so greatly broadened the territory that we, who will be left behind, will have to consider. It is also the reason why you have contributed the structure which we value. We have not only covered a lot of ground, but some of the matters covered have been discussed in considerable depth. This leaves us with a number of problems. We have to respond properly to the signals that we have heard. One of them that I see as an immediate responsibility is at the empirical, factual, investigative level. We have been alerted by frequent remarks voiced around this table that there is a lot of "noise" in the system. I think we should go first to those places where the complaints were the loudest and yet continue to be as objective as we can possibly be, which means trying to listen to both sides of some of these accounts.

Also, we shall continue to pound away at the problem, "What are the needs for information at the bottom level of the heap?" In this connection I would like to say one thing by way of tribute to the many foot soldiers we have encountered in our previous manpower projects. I really haven't heard a single problem discussed around this table that has not been raised (although possibly from a different perspective and possibly in a different way) by the people at the local office or school level. This includes rather sophisticated problems, such as the difference between education and training, the importance and implications of having sound demographic data, or this matter of what do you train for, the job near at hand or the one in the future.

We have other jobs besides field work. Professor Crossman outlined the problems of conceptualization with which we will be faced. Nor can we forget the complexities involved in the system -- the different needs existing at the local level and at the other levels in the hierarchy. This was brought into focus by one of Mr. Epstein's remarks, that one mission of an information system is to serve as a "triggering mechanism". Better information evidently can make an impact going beyond more effective placement or better counseling. It has the power to trigger certain changes in fiscal or other policies. We are going to have to keep this consideration in view as well, lest the elephant start steering the rider.

Joseph Epstein

There is very little I have to add to what has been said. I just want to throw out one thought since Irv and I are at the federal level. Our research program does not only design or consider things from the national level. What

we have been doing here was to consider labor market information systems from the vantage point of the local level, to answer what a good sophisticated study of the San Francisco Bay area could tell us about how the subsystems operate at the local level and how they interact with other subsystems. We have been looking for grassroots answers and how those answers might relate to the federal level.

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LIST OF ACRONYMS OCCURRING IN THE PROCEEDINGS

BLS	Bureau of Labor Statistics
CAMPS	Cooperative Manpower Planning Systems
CEP	Concentrated Employment Program
CMA	Comprehensive Manpower Act
COMO	Conceptual Model Cities
CPS	Current Population Survey
DOT	Dictionary of Occupational Titles
ESARS	Employment Security Automated Reporting System
FAP	Family Assistance Planning
HRD	Human Resources Development
JIS	Job Information Service
JOLTS	Job Opportunities - Labor Turnover Survey
LINCS	Labor Inventory Network Communication System
LMI	Labor Market Information
MDTA	Manpower Development and Training Act
MM	Major Market
ORD	Office of Research and Development
SIC	Standard Industrial Classification
SMSA	Standard Metropolitan Statistical Area
UES	Urban Employment Statistics Program
UI	Unemployment Insurance
USTES	U.S. Training and Employment Service
VIEW	Vocational Information for Education and Work
WIN	Work Incentive Program